ADM.
ARY
G
881
.34
6
1

INTERNATIONAL MONETARY FUND

STAFF PAPERS

OF MICHIGAN
JAN
BUSINESS ADMINISTRATION
LIBRARY

CONTENTS

MONETARY ANALYSIS OF INCOME FORMATION AND PAYMENTS PROBLEMS.....J. J. Polak 1

BANKING IN THE MIDDLE EAST.....Anwar Ali 51

INTEREST RATES OUTSIDE THE ORGANIZED MONEY MARKETS OF UNDERDEVELOPED COUNTRIES
U Tun Wai 80

THE 1954-55 IMPROVEMENT IN JAPAN'S BALANCE OF PAYMENTS.....P. R. Narvekar 143

STAFF PAPERS

ALLAN G. B. FISHER, *Editor*
DOROTHY WESCOTT, *Assistant Editor*

Editorial Committee

Allan G. B. Fisher, *Chairman*
Hans Aufricht
Richard Goode
Charles L. Merwin, Jr.
Henry C. Murphy
Briar. Rose
Ugo Sacchetti

From the Foreword to the first issue:

"Among the responsibilities of the International Monetary Fund, as set forth in the Articles of Agreement, is the obligation to 'act as a center for the collection and exchange of information on monetary and financial problems,' and thereby to facilitate 'the preparation of studies designed to assist members in developing policies which further the purposes of the Fund.' The publications of the Fund are one way in which this responsibility is discharged.

"Through the publication of *Staff Papers*, the Fund is making available some of the work of members of its staff. The Fund believes that these papers will be found helpful by government officials, by professional economists, and by others concerned with monetary and financial problems. Much of what is now presented is quite provisional. On some international monetary problems, final and definitive views are scarcely to be expected in the near future, and several alternative, or even conflicting, approaches may profitably be explored. The views presented in these papers are not, therefore, to be interpreted as necessarily indicating the position of the Executive Board or of the officials of the Fund."

The authors of the papers in this issue have received considerable assistance from their colleagues on the staff of the Fund. This general statement of indebtedness may be accepted in place of a detailed list of acknowledgments.

Subscription: US$3.50 per volume or the approximate equivalent in currencies of most countries. Three numbers constitute a volume. The numbers, however, are not issued at regular dates; moreover, all of the three numbers are not necessarily issued within one calendar year. Single copies may be purchased at US$1.50. Subscriptions and orders should be sent to:

THE SECRETARY
International Monetary Fund
1818 H Street, N.W.
Washington 25, D.C.

INTERNATIONAL
MONETARY FUND

STAFF PAPERS

Vol. VI November 1957 No. 1

Monetary Analysis of Income Formation and Payments Problems

J. J. Polak*

THE PURPOSE OF THIS PAPER is to bring monetary events, monetary data, and monetary problems within the framework of income analysis, and thereby to bridge the gap between (1) the views widely held on the relation between financial policies and payments questions and (2) the analytical tools used to explain payments developments. Broadly, payments problems are associated with inflationary causes; and moderation in credit expansion is generally prescribed as a preventive or a curative of payments difficulties. But since existing analytical studies rarely succeed in integrating monetary and credit factors in the explanation of income or of payments developments, an adequate theoretical basis—in particular, a quantitative basis—for these conclusions seems to be lacking.

The failure to accommodate monetary factors in the analysis probably becomes most evident when questions are raised concerning the effects of specified monetary changes on income or on the balance of payments. Questions like the following will typically go begging, not merely an answer, but even a method to arrive at an answer. What would be the effect of a credit expansion of 10 million pesos in country A? The money supply in country B has increased by x per cent during the last year; is this, or is it not, too much from the point of view of the balance of payments or from that of internal balance? Country C prescribes that bank credit may not expand by more than 2 per cent per month; what is the relevance of such a percentage?

The embarrassing inability to handle such questions contrasts strikingly with the ease with which nonmonetary problems are approached in income analysis. Every graduate in economics knows how to compute the effect of a given increase in investment on income, imports, etc. Allow him a few hours to estimate the required propensities—to save, to import, to pay taxes, etc.—and he can provide the answer.

But the customary income analysis cannot handle monetary ques-

* Mr. Polak, Deputy Director of the Department of Research and Statistics, is a graduate of the University of Amsterdam. He was formerly a member of the League of Nations Secretariat, Economist at the Netherlands Embassy in Washington, and Economic Adviser at UNRRA. He is the author of *An International Economic System* and of several other books and numerous articles in economic journals.

tions. Even where it is pushed to a considerable degree of refinement, it not infrequently omits monetary factors altogether. Thus the system of equations underlying the Central Economic Plan for the Netherlands[1]—supposedly a tool of economic analysis to guide economic policy in a country relying importantly on monetary instruments—does not refer to money or any similar variable in any of its 27 equations with 55 economic variables.

The tools used in the economic analysis of particular situations are necessarily simplifications of a more general economic theory—simplifications which bring into focus the factors that seem most important in the classes of situation studied. The multiplier analysis was a simplification that seemed particularly appropriate to the developed countries in the depression conditions of the 1930's when the demand for money was highly elastic. This particular simplification is much less useful in dealing with developed economies that are on the verge of inflation; or with economies, such as those of most of the less developed countries, where money is kept almost exclusively for transactions purposes and its demand is not very elastic; or with countries, developed or less developed, which rely to a considerable extent on monetary policy to guide their economies.

To find a more suitable simplification it is necessary to go back to a more general body of theory and make it serviceable for the situations now being considered. Keynes' General Theory[2] provides an adequately integrated theory of income (employment) and money. But while the part of the theory dealing with income has been given a form suitable for economic analysis, the monetary part has seemed to be less tractable to such treatment and—the excess liquidity of the 1930's helping—has stayed in the limbo of classroom and journal discussions.

Perhaps the failure to develop empirical monetary analysis on the basis of the General Theory is less surprising than the fact that an empirical income analysis was developed from it. Surely, anyone who took seriously all of Keynes' objective (six) and subjective (eight plus four) factors affecting the propensity to consume, together with their variability over time, would shrink from thinking of this propensity as something even approaching a statistical constant (which, of course, Keynes never suggested it was).[3] But empirical economics, taking its

[1] Central Planning Bureau, *Central Economic Plan for 1955* (The Hague, 1955).

[2] J. M. Keynes, *The General Theory of Employment, Interest and Money* (London and New York, 1936).

[3] Even in Keynes' own early application of the multiplier to policy problems, the marginal propensity to consume is handled almost purely on an illustrative basis, as is evident from the following quotation from his *The Means to Prosperity* (New York, 1933), p. 10: "What proportion of this additional income will be disbursed as additional expenditure? Insofar as it accrues to the wage-earning classes, one can safely assume that most of it will be spent; insofar as it increases profits

cue from Kahn's[4] earlier dynamic multiplier approach, has tended to sweep away doubts and fears of this nature, at least "as a first approximation," and has managed to turn Keynes' formal multiplier into a usable tool of analysis and policy. It has gone one step further and substituted for his marginal efficiency of capital—that ragbag of psychology, uncertainties, and expectations—the elegance of a "marginal propensity to invest."[5]

A somewhat similar streamlining of the monetary side of the analysis is attempted here. Our starting point is that income equals the quantity of money times the income velocity of money. This is nothing but an identity, like the statement that income equals consumption plus investment. But if meaningful propositions about money and about the velocity of money can be found, it may be possible, via this definition, to come to meaningful propositions about income.

Far too little work has been done on the factors that explain changes in the velocity of circulation of money to permit here a treatment of this subject that could be considered at all satisfactory. Readily available statistics for a large number of countries are presented in Appendix I, Table 3. They are based on end-of-year figures for money supply divided by national income for the corresponding year; a more refined analysis would probably be based on monthly or quarterly data for money supply. The annual data show considerable evidence of year-to-year stability or of a tendency for movements in one year to be subsequently reversed.

As shown in Chart 1, the ratio of money to income in 1954 was very close to that in 1950 in a number of countries where there were large changes in the money supply—such as Brazil, Burma, Chile, Ecuador, Japan, New Zealand, Thailand (1953). The chart also shows that the changes in the ratio of money to income are usually much smaller than those in the money supply itself. In the years covered, the most notable exceptions were Canada, the Philippines, and the United Kingdom—where the money supply itself changed very little—and Israel, where a large rise in the money supply was supported by an even larger increase in its velocity.

---

and salaries and professional earnings, the proportion saved will be larger. We have to strike a rough average. In present circumstances, for example, we might assume that at least 70 per cent of the increased income will be spent and not more than 30 per cent saved."

[4] R. F. Kahn, "The Relation of Home Investment to Unemployment," *Economic Journal* (London), Vol. 41 (1931), pp. 173–98.

[5] Professor Meade was, I believe, the first to make investment endogenous by linking expected profits to current profits and thus being able to introduce an "incentive to invest" with respect to income. See J. E. Meade, "A Simplified Model of Mr. Keynes' System," *Review of Economic Studies* (London), Vol. 4, No. 2, February 1937, pp. 98–107.

CHART 1. FLUCTUATIONS IN MONEY SUPPLY (*MO*) AND IN THE RATIO OF MONEY TO INCOME (*MO/Y*) IN 44 COUNTRIES, 1950–54

(*Logarithmic vertical scale*)

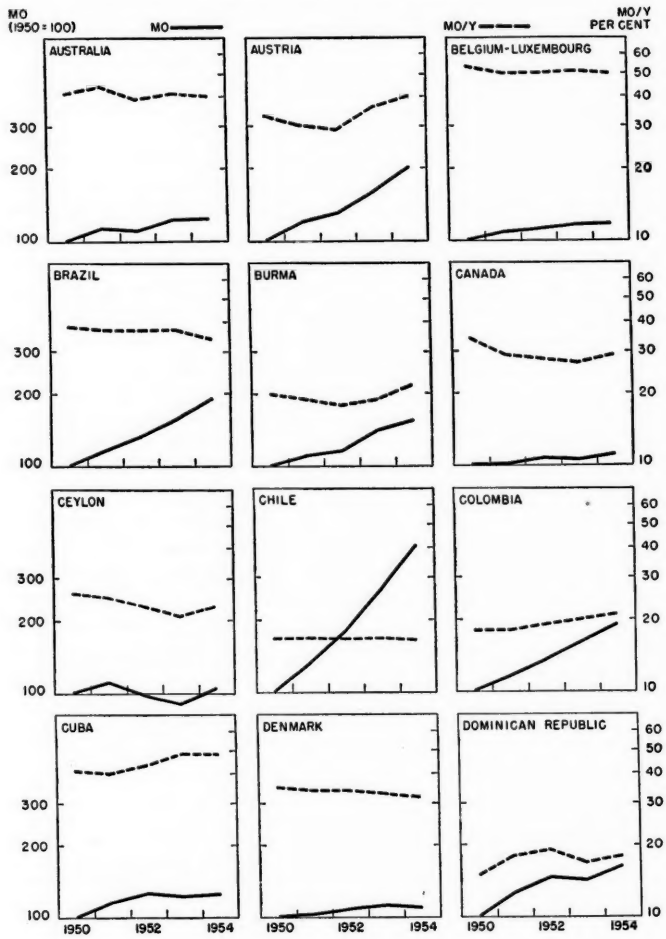


CHART 1 (*continued*). FLUCTUATIONS IN MONEY SUPPLY (*MO*) AND IN THE RATIO OF MONEY TO INCOME (*MO/Y*) IN 44 COUNTRIES, 1950–54

(*Logarithmic vertical scale*)

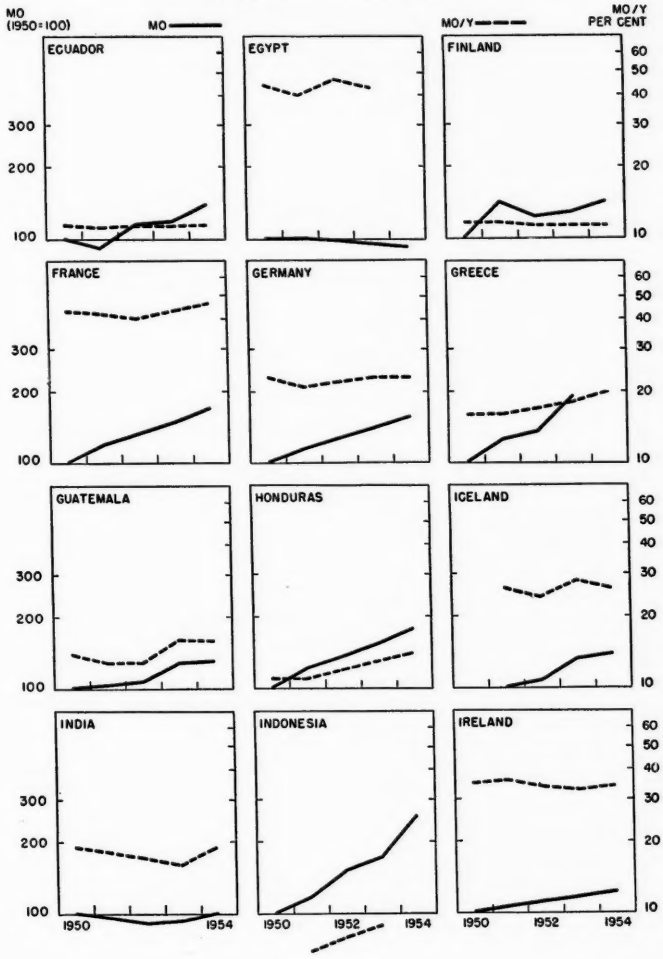


CHART 1 (*continued*). FLUCTUATIONS IN MONEY SUPPLY (*MO*) AND IN THE RATIO OF MONEY TO INCOME (*MO/Y*) IN 44 COUNTRIES, 1950–54

(*Logarithmic vertical scale*)

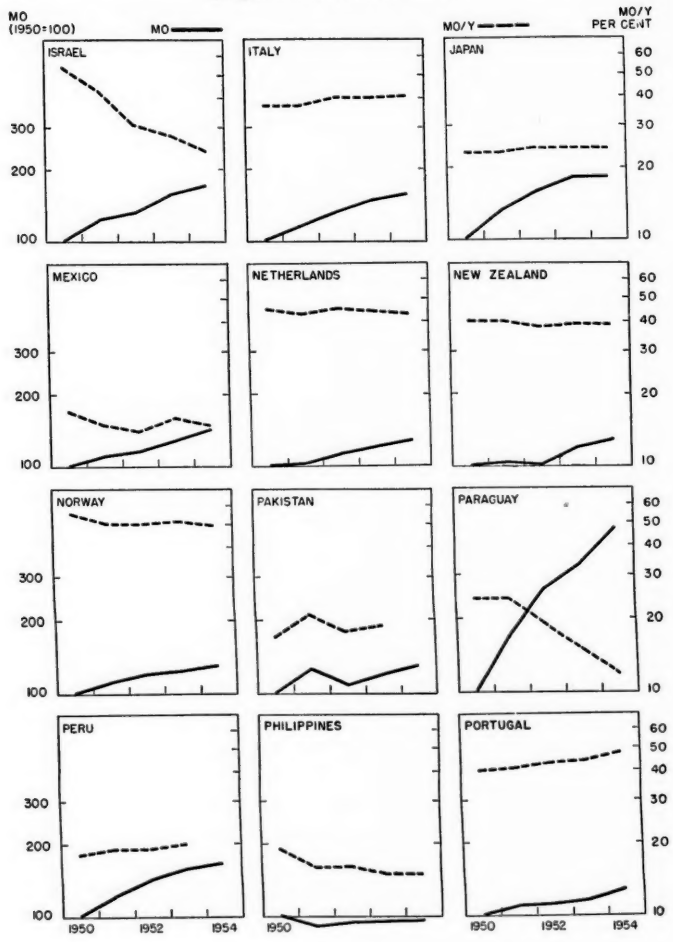
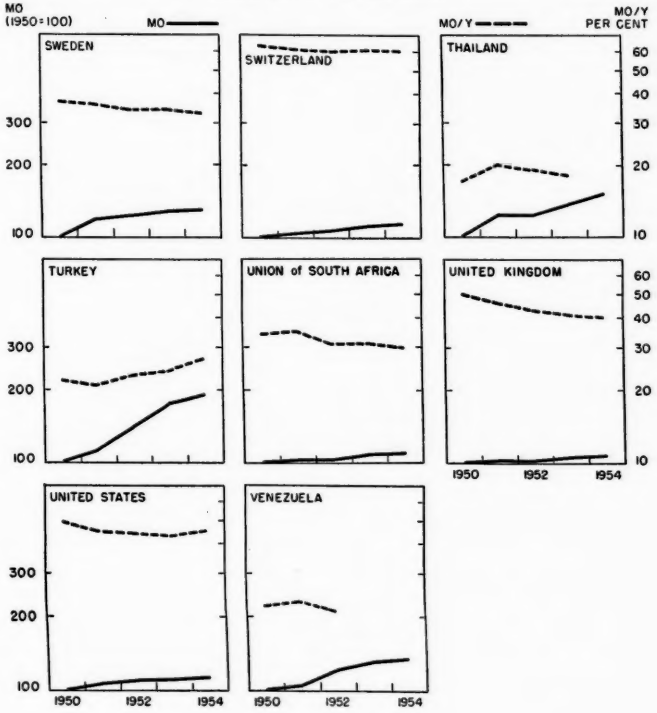


CHART 1 (*concluded*). FLUCTUATIONS IN MONEY SUPPLY (*MO*) AND IN THE RATIO OF MONEY TO INCOME (*MO/Y*) IN 44 COUNTRIES, 1950–54

(*Logarithmic vertical scale*)



These crude empirical observations on the money-income ratio could not support the proposition that the income velocity of money is a constant under all circumstances, a proposition that would in any case be meaningless; but they are sufficient to suggest that the assumption of a constant ratio of money to income may be a worthwhile step in a monetary theory of income formation, and that it might be profitable to investigate the full consequences of this assumption. That is what is done in Parts I-IV of this paper.

There are further grounds for the separate treatment of the quantity of money and its velocity. In the first place, it is quite plausible to assume that people adjust their holdings of money in proportion to changes in monetary transactions,[6] of which, in the relatively short run, national income (or gross national product) is a suitable indicator.[7] Secondly, it is relevant to note that the monetary authorities in many countries base their policy on the assumption that the income velocity is approximately constant. Lastly, it is probably possible to isolate at least some of the factors that determine such fluctuations in velocity as occur. A very provisional discussion of these factors is given below in Part V.

Two general points should be made at this stage. First, it might be thought that piling a "propensity to hold money" on top of all sorts of other propensities would result in compounding one set of dubious assumptions with another. But, as will be shown, this turns out not to be so. The introduction of the constant ratio of money to income means *eo ipso* the discarding of the propensities to save, consume, and invest. There is, in this respect, a real and perhaps unexpected gain in simplicity. Secondly, it might be asked whether, in the assumptions made about money, the Quantity Theory of Money does not rear its barely disguised head? That question will be considered later. Suffice it to say at this stage, first, that the monster was never really slain;[8] and, second, that once it has been properly tied to income analysis it appears to be not only harmless but indeed quite useful.

[6] Professor Baumol has put forward an alternative theoretical suggestion, viz., that cash balances should vary in proportion to *the square root* of the value of transactions. This alternative does not, however, seem to have general validity. See J. J. Polak and William H. White, "The Effect of Income Expansion on the Quantity of Money." *Staff Papers*, Vol. IV (1954–55), p. 416, footnote 15.

[7] A valuable business cycle theory has been built on the comparable assumption that holdings of another category of circulating capital, inventories, would be proportional to sales.

[8] In "Keynesian Economics and the Quantity Theory," Don Patinkin shows that, under plausible assumptions, from "the analytical framework . . . of the modern income-expenditure approach . . . emerges . . . [the voice] of the traditional quantity theory." (Kenneth K. Kurihara, ed., *Post Keynesian Economics*, New Brunswick, N.J., 1954, p. 139.)

SUMMARY OF CONCLUSIONS

It will be found that the analysis that deals with monetary factors also has to incorporate, as autonomous causes, changes in exports and in import restrictions. The conclusions of this paper deal, therefore, with these subjects as well as with the effects of credit expansion by the monetary system. This credit expansion is distinguished sharply from that by other institutions whose liabilities are of a nonmonetary character. The conclusions may be summarized as follows:

On the assumption of a constant velocity of circulation and a number of other simplifications specified in the text:

I A. A *lasting* increase in *exports*[9] will, by itself, i.e., without credit expansion or relaxation of import restrictions, gradually bring about
  (1) the same percentage increase in the rate of money national income;
  (2) an increase in the rate of imports equal to the increase in the rate of exports;
  (3) an increase in the quantity of money and in foreign assets of the order—depending on the country concerned—of 50 to 300 per cent of the increase in the annual rate of exports.

B. A *lasting* increase in the rate of *credit expansion* by the monetary system will, by itself, gradually bring about
  (1) the same increase in the rate of money income and of the stock of money as would be produced by a lasting increase in exports of the same size;
  (2) an increase in the rate of imports equal to the increase in the rate of credit expansion;
  (3) a rate of loss in reserves that will approach the rate of credit expansion;
  (4) a total loss in reserves equal to the cumulative credit expansion minus the increase in the quantity of money indicated in I A(3).

II A. A *temporary* increase in *exports* will, by itself, bring about
  (1) a temporary increase in money income which, aggregated over all periods, will be of the same proportional size as the increase in exports;
  (2) a temporary increase in imports which, aggregated over all periods, will be of the same absolute size as the increase in exports;
  (3) a temporary increase in money and reserves.

[9] The effects of import restrictions correspond to those of equivalent increases in exports.

B. A *temporary expansion of credit* (terminated, but not reversed, after the end of, say, one year) will, by itself, bring about
   (1) a temporary increase in money income and the stock of money;
   (2) a temporary increase in imports and a permanent reduction of reserves equal in size to the credit expansion.

The same relationships determine the size of the expansion of credit by the monetary system that can safely be permitted on the basis of a permanent increase in exports. This varies from virtually none for some small countries with a low ratio of money to imports to four or five times the increase in exports for large countries with a high ratio of money to imports.

Changes in velocity attributable to two sets of causes are discussed in Part V. First, the velocity of circulation may oscillate in response to a sudden large influx or efflux of money. Temporary fluctuations in velocity that are due to such causes do not affect the conclusions, except as far as their timing is concerned. The conclusions are affected, however, by changes in velocity in response to changes in the rate of interest, which occur primarily in the more developed countries. The variability of money holdings in these countries in response to changes in the rate of interest implies the necessity of greater intensity of credit policy than would be needed in most of the less developed countries in order to obtain a given change in money income.

I. Income and Money

The circular flow of income

On the assumption of a constant ratio of income to money, the income process may be pictured as a circular flow in which the stock of money and the flow of income are uniquely related by proportionality, in much the same way as the quantity of water in a closed set of circuits would be related to the recordings on a flow meter set anywhere in these circuits.

The circular character of the income stream implies that the stream feeds on itself. There are qualifications to this, but they do not destroy the main proposition, viz., that income in one period is the main determinant of income in the next period. The process from income in period 1 to income in period 2 may run through different channels. Most income will accrue to consumer households, be spent on consumption goods, and reappear as new income in the form of payments to the factors of production in the consumption goods industry. Other income

may find its way to reincarnation through taxes and government purchases of goods and services. A third section of income may run through the capital market, or through savings banks; or it may not change owners at all, as when business profits are ploughed back into self-financed investment.

Rather than concentrating on the circular character of the income flow, the multiplier analysis has put its main emphasis on the lapses from circularity, in particular for new additions to the stream. It has stressed that, on its way around, some income may get lost, never to show its face again as new income. Some savings by consumers may never be invested by anyone else. Some of the tax money paid to the government may be saved by it forever—e.g., in the form of repayment of the public debt—or at least for a long time. Corporations may withhold profits from shareholders without having any short-run plans to use the money for expansion of capacity. The various propensities in the multiplier analysis are designed to account for these "leakages" from the main stream. Since the multiplier analysis is typically non-monetary (or perhaps we should say a-monetary) in character, it is of no consequence to it whether any shrinkage recorded in the income flow is due to a reduction in the velocity of circulation of a given quantity of money or to a reduction in the quantity of money at unchanged velocity.

By focusing on the monetary side of the same circular process, we can approach the problem from another angle, which makes it more tractable in many situations. The assumption of a constant ratio of income to money obviously implies that the income stream cannot change except as the quantity of money changes. If, therefore, we can explain changes in the quantity of money, we would have a satisfactory explanation of income by means of a monetary analysis.

In contemporary economic analysis, as distinguished from economic theory, there is no lack of "explanations" of changes in the quantity of money. "Money" is an entry, or a combination of entries, on the liability side of the balance sheets of the banking system. Since balance sheets are constructed on the principle that the sum of all assets equals the sum of all liabilities, it is always possible to "explain" the changes in one balance sheet item by adding together (with appropriate signs) the changes in all other balance sheet items. Since the item called "money" represents in many countries a very large proportion of all liabilities of the banking system, one can usually come close to an "explanation" of the changes in money by adding the changes in the asset items in the balance sheet.

In the studies of the "origin of the money supply" that are prevalent

in Latin America,[10] this process of "explanation" is formalized to the point of designating the quantity of money that is equal to the (net) foreign assets of the banking system as "money of external origin" and the quantity of money that is equal to the domestic assets of the system as "money of internal origin."[11]

We shall follow this analysis in its simplification, viz., that changes in the quantity of money equal changes in (net) foreign assets of the banking system *plus* changes in domestic credits of the banking system. Thus, for reasons discussed in more detail below,[12] the changes in other liabilities of the banking system are disregarded. But accepting then the statistical identity, what explanatory value does it have?

The assumption of a constant ratio of income to money constitutes in itself an economic explanation of changes in the quantity of money; it implies that money changes proportionally to changes in income. There is no general presumption that the "explanations" based on balance sheet identities contribute any meaningful additional information to the explanation of money and income. Whether they do or not depends on whether they reduce the changes in money to other variables that may themselves usefully be considered as autonomous variables—variables beyond which economic explanations do not in the particular situation want to probe. This question will be considered separately for (1) the purchase of domestic assets and (2) the purchase of foreign assets; and it will be found that, both from an analytical and from a policy point of view, (1) is a useful stopping point of the analysis, while (2) is not.

Domestic credit creation

The decision to treat domestic credit expansion as an autonomous variable is dictated by the purposes of our analysis. To be able to integrate monetary analysis into income analysis, to study the effects of credit policy on income and the payments situation, credit creation must be accepted as an ultimate variable, not to be explained away further in terms of such variables as the desire to invest or the willingness to save.

This treatment of domestic credit expansion might not be reasonable in a purely descriptive, historical study which could, and perhaps

[10] See Earl Hicks, Graeme S. Dorrance, and Gerard R. Aubanel, "Monetary Analyses," in "Recent Developments in Monetary Analysis," *Staff Papers*, Vol. V (1956–57), pp. 342 ff.

[11] Domestic nonmonetary liabilities are either netted out against domestic assets or, in the annual *Economic Survey* of the Economic Commission for Latin America, treated separately in a residual category called "money supply absorbed."

[12] Part IV.

should, treat the behavior of the banking system as part of the model. Such a study might, for instance, find that in a certain country bank credit tended to be expanded particularly rapidly after export income or exchange reserves had increased. But from the vantage point of the monetary authorities—and the same holds for the International Monetary Fund—a different approach is the more reasonable one. Credit expansion is subject to the responsibility of the banking system. It may be difficult, perhaps in some circumstances humanly impossible, for the system to withstand demands for credit from the government or from other insistent borrowers; and in such circumstances, the desire to make public development expenditure, or to construct private factories, may be considered, from many points of view, the cause of the expansion in the economy. But for purposes of monetary analysis and monetary policy there is a clear gain in clarity if the responsibility is pinpointed on the credit expansion. The economic development could also have been financed by higher taxes or by a foreign loan. The factories might have been built by restriction of consumption or by the repatriation of capital. In all these situations, the desire to spend for a particular purpose would not have led to a payments problem. In a real sense, the credit expansion is the cause of the payments problem.[13]

As statistically measured, credit expansion is a net concept, the difference between credit outstanding at the end and at the beginning of a period. Part of the repayments that occur during a period may be caused by new loans granted during this or a preceding period. To what extent, then, can the *net* credit extension be considered as autonomous?

The answer is that credit policy over any but the shortest period of time is essentially a *net* operation. Some of the bank loans are repaid every day, and new ones are granted every day. The effect of a particular credit policy can therefore be measured correctly on a net basis only. The use of net credit expansion as an exogenous factor makes it necessary to distinguish between the credit granted for one particular large project and net credit expansion during a period. The distinction

[13] A similar point of view on the subject of a proper choice of models has been expressed by Dr. Holtrop: "It is clear that such a model [i.e., a multiplier model] cannot fit the purposes of a central bank. If one analyzes monetary phenomena with the purpose of getting some guidance for monetary policy, one must necessarily use a model in which monetary policy can find its place. If we believe that by monetary policy we can exert an influence on the creation of money, and maybe also on the propensity of the business community to hoard or to dishoard, and if we further believe that the exertion of such influence will affect the course of the inflationary or deflationary process, then, for the exposition of our ideas, we must choose a model in which the creation and cancellation of money and the acts of hoarding and dishoarding are treated as autonomous factors." See M. W. Holtrop, "Method of Monetary Analysis Used by De Nederlandsche Bank," in "Recent Developments in Monetary Analysis," *Staff Papers*, Vol. V (1956–57), pp. 305–6.

is particularly important in those cases where the increase in income that results from credit expansion will lead to substantially higher tax receipts by the government and, as a result, a reduction of government borrowing from the banking system. This does not affect the analysis insofar as it deals with an interpretation of the past; credit expansion to business will be found to be offset by a reduction in net credit to the government. But with respect to policy for the future, any "leak" of purchasing power owing to increased tax receipts will have to be taken into account.

Foreign trade

The suitability of the foreign balance as an autonomous factor has been discussed considerably in the framework of multiplier theory; and, insofar as economic questions ever get resolved, this one appears to have been resolved rather definitely in the negative.[14] The foreign balance has been ruled out as a suitable multiplicand, primarily because it fails to use the worthwhile empirical observation that fluctuations in imports are to a large extent determined by fluctuations in income. Accordingly, a useful model should include the various elements of the balance of payments—especially exports and imports—separately, rather than only their net effects on reserves.

Next to credit creation, exports are the main source—and normally much larger in size—of continuous injections of new income into the circular flow. The sale of goods or services abroad continually captures income from abroad and naturalizes it as income of the factors of production engaged in the export industry. Broadly speaking, this stream of new income tends, of course, to be offset by an outgoing income stream reflecting imports, where incomes are paid out to become the incomes of foreigners and, thereafter, to circulate mostly in their income streams. In a situation of balance of payments equilibrium (on goods and services account, to be precise), the income additions from exports will match exactly the income subtractions from imports and the circular flow of income is not changed—from the point of view of static analysis—by the fact that, through exports and imports, it is linked to a wider set of national flows.

A dynamic analysis has to make allowance, however, for the changes in the income stream that may arise from the export and import sides. On both sides, there may be either autonomous or induced changes. Autonomous changes find their origin outside the domestic income

[14] J. J. Polak, "The Foreign Trade Multiplier," *American Economic Review* (Menasha, Wisc.), Vol. 37 (1947), pp. 889-97; Gottfried Haberler, "Comment," *ibid.*, pp. 898-906; J. J. Polak and G. Haberler, "A Restatement," *ibid.*, pp. 906-7.

stream itself but the causes may be foreign or domestic. Thus a country's exports may change because foreign income changes, or foreign import restrictions are adjusted, or a new export industry is established in the country. Imports may change because of changes in the country's own tariff policy or consumer preferences. All these would be autonomous changes. They could be either stabilizing or destabilizing with respect to domestic income, depending on the rate of income with which they happen to coincide. An autonomous fall in exports would be stabilizing in a period of inflation, destabilizing in a period of internal deflation.

Induced changes in exports or imports respond to changes in the domestic income stream and are always stabilizing. When internal demand falls, the resulting decline in prices may produce some offsetting increase in exports. When income rises, imports will tend to increase too, thus channeling some of the higher income abroad and bringing the level of income in the next period closer to normal. Conversely, when there is an autonomous contraction of income, imports are likely to fall, thus transmitting some of the contraction abroad and mitigating, correspondingly, the contraction of income at home. Imports perform the income-stabilizing function most strongly when the income elasticity of demand is high, so that a relatively large proportion of a high national income flows off abroad, while a large proportion of smaller income is kept within the domestic income flow.

Empirically, for most countries at most times, autonomous changes tend to dominate exports, while induced changes account for most of the variations in imports. The following analysis will for simplicity assume that these observations hold not merely as empirical generalizations, but rigidly. This simplification is justified also because—if one does not forget its nature—it does not entail a loss in generality of the conclusions. For at the level of abstraction at which we operate, an autonomous increase in imports is equivalent in effect to an autonomous decline in exports; and any marginal effect of income (or domestic prices) on exports may be allowed for, in numerical calculations, by a corresponding increase in the coefficient indicating the marginal effect of income (or domestic prices) on imports.[15]

[15] Assume that both exports and imports have an autonomous component (X_a and M_a) and an induced component X_i and M_i, the latter being linearly dependent on income:

$$X_i = xY \qquad x < 0$$
$$M_i = mY \qquad m > 0$$

In general, x would be small compared with m, and normally the fluctuations of X_a would be large compared with those of X_i. Also, unless import restrictions

In the simplified model used in this paper, it is assumed that exports minus imports equals changes in reserves. The whole array of other items—invisibles, capital items, transfers, and, most importantly, errors and omissions—which lie between the trade and the reserve items in the balance of payments is disregarded. For any practical application of the analysis it would, of course, be necessary to find a suitable way of assimilating each of these items with exports, imports, or reserve movements.

Credit, Exports, and the Income Stream

When we speak of credit as an addition to the income stream, we pass over an intermediate stage, the purchase by the borrower of goods. If these goods are totally domestic goods, the increase in domestic income will be as large as the credit expansion. If they have an import component, the domestic income creation will be proportionally smaller. And if, as the marginal case, the import component is 100 per cent—if the investment financed by credit expansion is wholly in imported commodities or foreign exchange balances—the domestic income component vanishes and the credit expansion is fully absorbed by increased imports. In that case, we might say that potential income is lost fully by an autonomous increase in imports of equal size.

The same qualification holds with respect to exports. They, too, create domestic income only insofar as they do not represent imports. Where exports have a high import component, the income creation per dollar of exports is small; and where exports are merely re-exports, the domestic income component vanishes. An increase in exports would be matched by an autonomous increase in imports.

The assumption of a constant velocity of circulation eliminates another complication, viz., the extension of credit or the purchase by the banking system of existing domestic assets which does not lead to expenditures on goods and services by the borrower or seller of the assets. An operation of this nature would be equivalent to an increase in the quantity of money without an increase in income, i.e., a reduction

---

were varied frequently with a large effect on the effective restriction of imports, fluctuations of M_a would tend to be small compared with those of M_i.

To simplify the analysis, the autonomous parts of both variables are combined under the name of one that is mostly autonomous

$$\text{Exports} = X_a + M_a$$

and the induced parts of both under the name of the one that is mostly induced

$$\text{Imports} = M_i + X_i = (m + x)Y$$

Similarly, one coefficient indicated for simplicity as the price elasticity of demand for imports could, at the same time, represent the effect of a change in relative prices on the balance of payments through imports and through exports.

in the velocity of circulation. So would a purchase by the banking system of existing foreign exchange holdings from the private sector. This is not to suggest that either of these transactions cannot occur, but that in our simplified system they have no place and, for that reason, may provisionally be left out of account.

II. The System

The economic model described in the previous section is extraordinarily simple. Its central relationship is that of the circular flow, with additions and subtractions as specified:

income of this period = income of the previous period
+ new income resulting from internal credit creation
+ new income resulting from exports
− income lost through imports.

Of the four variables in this equation, two—credit creation and exports—are considered exogenous in character. Only one more equation is needed (and possible), therefore, to tie the whole system into a complete package. That equation is the one explaining imports. The money value of imports is explained here in terms of the money value of income. This form of the import equation implies the assumption of a unit elasticity of demand for imports.[16]

[16] Assume that the true structural import equation is in real terms, linking the volume of imports (m) to the volume of real income (y), while it also contains a substitution term:

$$\Delta m = \mu \Delta y + \epsilon m(\Delta p_d - \Delta p_m) \qquad \text{(i)}$$

Here, μ is the marginal propensity to import in real terms, ϵ is the elasticity of substitution of foreign goods for home goods, p_d is the domestic price level, p_m the import price level. The substitution term is defined to include both the substitution effect in the narrow sense and the income effect of price changes; and real income is accordingly defined as the volume of domestic output *not adjusted* for changes in the terms of trade. The treatment differs in these points from that in my *International Economic System* (Chicago, 1953).

Taking p_d and p_m as indices with base = 1, we can substitute

$$\Delta m = \Delta M - m\Delta p_m \qquad \text{(ii)}$$

$$\Delta y = \Delta Y - y\Delta p_d \qquad \text{(iii)}$$

Hence (i) becomes

$$\Delta M = \mu \Delta Y - \mu y \Delta p_d + m\Delta p_m + \epsilon m(\Delta p_d - \Delta p_m) \qquad \text{(iv)}$$

If the marginal propensity to import equals the average propensity, so that $\mu y = m$, (iv) becomes

$$\Delta M = \mu \Delta Y - m(1 - \epsilon)(\Delta p_d - \Delta p_m) \qquad \text{(v)}$$

This is equivalent to an equation in terms of M and Y only, as used in the text, for any and all values of p_d and p_m, provided $\epsilon = 1$.

Admittedly, the specific assumption that $\epsilon = 1$ has been made for reasons of sim-

The two equations together determine the development of the two endogenous variables, income and imports, as functions of the two autonomous variables, exports and credit creation.

The equations may be put in a slightly more rigorous mathematical form, by the use of the following symbols:

Y	national income (money value)
$\triangle DA$	increase in credit by the banking system
X	exports (money value)
M	imports (money value)
$\triangle MO$	increase in quantity of money
m	marginal change in money value of imports owing to change in money national income[17]
a	ratio of stock of money to the flow of money national income (annual rate)[18]

The equations then read:

$$Y(t) = Y(t\text{–}1) + \triangle DA(t) + X(t) - M(t) \tag{1}$$

$$M(t) = mY(t\text{–}1) \tag{2}$$

The expressions (t) and $(t\text{–}1)$ indicate the timing of the variables in terms of unit periods that are equal to the income period of circulation of money. Imports in equation (2) are assumed to be lagged by one period.

Underlying the first relationship is the assumption of a constant velocity of circulation of money which links money to income by proportionality, as expressed by equation (3):

$$\triangle MO(t) = Y(t) - Y(t\text{–}1) \tag{3}$$

If this equation is combined with the definition of changes in the balance sheet

$$\triangle DA(t) + X(t) - M(t) = \triangle MO(t) \tag{4}$$

equation (1) is obtained.

---

plicity of the system. This is not to admit, however, that it is an unreasonable assumption. Insofar as our empirical evidence goes, ϵ is probably somewhat smaller than unity for most countries. We must not forget, however, that the relative price term in the import equation also does double duty for the effect of changes in relative prices on exports (see footnote 15). The implicit assumption is, therefore, that a rise in domestic prices by 1 per cent would of itself worsen the country's balance of payments by 1 per cent of the value of imports through import substitution plus loss on exports. Wherever, in a particular case, better specific knowledge about the magnitude of ϵ is available, it could, of course, be used. But this would then necessitate building into the system separately a price and a quantity component of the change of national income, while in the present model the extent to which a given change in money income is due to quantity or to price changes may be ignored.

[17] Note that the special notations used in footnote 16 do not apply in the rest of the paper.

[18] This coefficient is not used until later.

This is another way of stating that the determination of income by a continuous circular flow, and the constancy of the velocity of circulation, are one and the same assumption. If the former is given up, e.g., by putting a coefficient (a marginal propensity to spend) that is different from unity before $Y(t-1)$ on the right side of (1), then (3) can no longer be true. This does not mean that, in a system in which a true Keynesian spending equation is assumed to be present, the quantity of money cannot depend on the rate of income. It only means that in such a system there must be another variable, such as the rate of interest, entering in (1), in (3), or in both, to make separate spending and money holding equations possible.

If the marginal propensity to spend is written as c, the dependence of $Y(t)$ on the rate of interest, $r(t)$, as $gr(t)$, and the dependence of money on the rate of interest as $hr(t)$, then (1), (3), and (4) combine to

$$Y(t)-cY(t-1)-gr(t)=Y(t)-Y(t-1)+hr(t) \qquad (5)$$

This determines the current rate of interest in terms of last period's income and rate of interest. Either one of the interest terms can be omitted; but if both are absent, as in (1) and (3), it follows that, unless c equals 1, the velocity of circulation cannot be a constant.

While this model may seem so obvious as to be trite, it is not common property of economists. Nor do the conclusions that follow from the model appear to be common property.

III. The Effects of Changes in Exports and Credit Expansion

In our system there are two main autonomous variables—exports (which also do double duty for autonomous changes in imports) and credit expansion. In this part of the study, the effect of changes in these variables on income, imports, and the monetary system is analyzed.

First a lasting change, i.e., from one level of exports to a continued higher level, and from one annual rate of credit creation to a continued higher rate of credit creation, is studied. The results found are summarized in Chart 2 and Table 1.

Lasting increase in value of exports

For some reason outside the country, e.g., a rise in world market prices, exports increase by, say, 20 million at an annual rate. Income increases by the same amount. As a result, the demand for money increases. If the income velocity of circulation in this country is 4 times

CHART 2. EFFECTS OF LASTING INCREASE IN EXPORTS (A) AND IN CREDIT CREATION (B)

(Assumptions: $m = H\ 0.20$, $a = 0.25$)

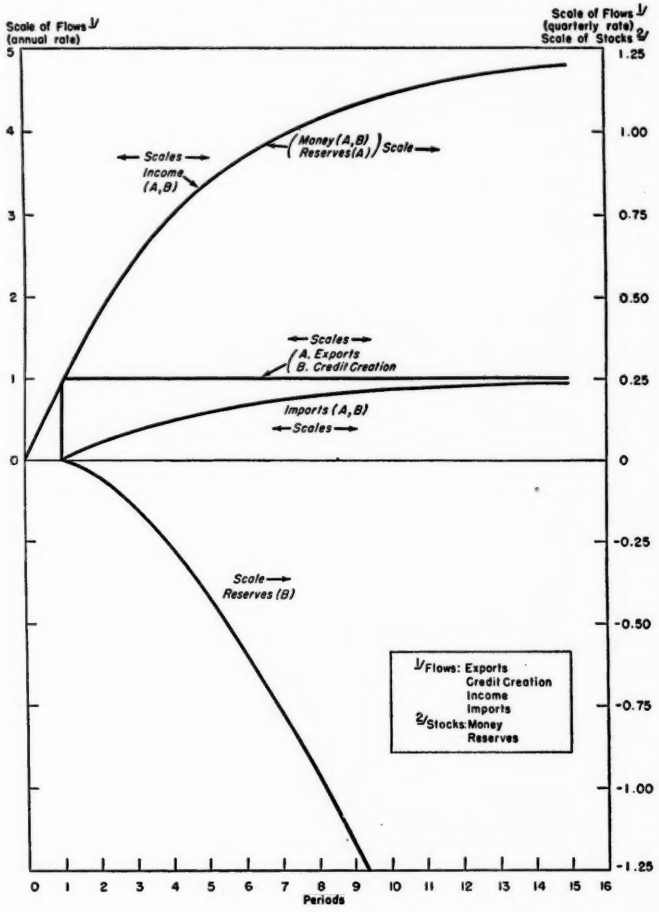


TABLE 1. EFFECT ON CURRENT VALUE OF THE DEPENDENT VARIABLES OF CURRENT AND PAST VALUES OF THE INDEPENDENT VARIABLE

Dependent Variable $t=0$	Independent Variables	Coefficient Applicable to Independent Variable of Period (t)				Sum of Coefficients* for $t \longrightarrow \infty$
		0	−1	−2	−3	
Income	Exports + credit creation	1	$(1-m)$	$(1-m)^2$	$(1-m)^3$	$\frac{1}{m}$
Imports	Exports + credit creation	0	m	$m(1-m)$	$m(1-m)^2$	1
Change in reserves	Exports	1	$-m$	$-m(1-m)$	$-m(1-m)^2$	0
	Credit creation	0	$-m$	$-m(1-m)$	$-m(1-m)^2$	−1
Money †	Exports + credit creation	a	$a(1-m)$	$a(1-m)^2$	$a(1-m)^3$	$\frac{a}{m}$
Reserves †	Exports	a	$a(1-m)$	$a(1-m)^2$	$a(1-m)^3$	$\frac{a}{m}$
	Credit creation	0	$-am$	$a[(1-m)^2-1]$	$a[(1-m)^3-1]$	$\frac{a}{m}-at$

NOTE: For description of table, see pages 28–29.

* Representing effect on dependent variable of a lasting increase in independent variable.

† All coefficients carry the factor a on the assumption that exports and credit creation are expressed as annual rates.

per year, the desired increase in the quantity of money will be 5 million. The additional exports provide the required additional money approximately at the rate at which it is required. There may be a temporary shortage of money if the exporters have to lay out money before they receive payment—e.g., to collect crops at higher prices or to hire additional workers. That situation will clear up soon, however; at the end of one income period of exports, enough money will have been received to continue business at the higher level. From here on, the extra earnings of the export industry can be spent and, under our assumptions, will be spent.

Most of the additional expenditure is likely to be directed toward domestic goods and services, thus increasing money income in the country. If there is sufficient excess capacity and demand is directed toward the output of the industries that have excess capacity, the increase in money income may represent mainly, or even entirely, an increase in real income, prices rising little or not at all; if, on the other hand, there is no spare capacity, the rise in money income will merely represent a rise in prices. Part of the additional spending will be directed toward imports, stimulated by the higher real income (if production could expand), or by the rise in prices in the country as against the price level abroad (if there is no possibility of expansion of production), or by some combination of the two. It will be recalled that the effect on imports of a 1 per cent rise in real income has been assumed to be about the same as the effect of a 1 per cent rise in the domestic price level (on the assumption that prices abroad remain constant); hence, the fraction of an increase in income that is spent abroad may be taken to be independent of the extent to which the expansion in money income was a "real" or a "price" phenomenon.

Assume that under the particular circumstances the fraction spent abroad (the marginal propensity to import) is one fifth; then income in the second quarter will run at the quarterly rate of 9 million above the original level: 5 million exports plus 4 million induced home expenditure.

In order to have the required money to handle the extra business of 4 million a quarter, the economy as a whole will have to save 4 million during the quarter. Either the recipients of the 4 million additional income will have to wait before they increase their spending, or others will have to save money to the extent that the first group does increase its spending.

In the third quarter, however, income can rise another step, as the necessary savings of money to handle the second quarter rate of income have been made. Thus in the third quarter, assuming again one fifth of the new increase to be spent abroad, income will go to 12.2 million (5+4+3.2), where it will have to remain for another quarter.

This process continues until income approaches its equilibrium level of 25 million per quarter (100 million per year) higher than before. The final increase is related to the initial increase by a multiplier of 5, which is the inverse of the figure assumed for the marginal propensity to import (0.2). At the final rate of income, imports will be 20 million per year above their original level: they will have increased as much as exports. There will no longer be a balance of payments surplus, and the quantity of money will be constant. It can be constant only at its equilibrium level, where it equals one quarter's income, or 25 million above its original level. Since no change in the domestic assets of the banking system has been assumed, the increase in the money supply must have been accompanied by an equally large accumulation of foreign exchange reserves.

Thus the 20 million increase in exports has had the following effects:

A. Income has gradually increased to a level 100 million higher. This level is determined by the increase in exports (20) and the assumed marginal propensity to import (0.20), viz., $\frac{20}{0.20}=100$. If (a) the marginal propensity to import equals the average ratio of imports to income,[19] and (b), initially, exports equal imports, then income in the new equilibrium position will have increased *in the same proportion* as exports.

B. Imports have gradually increased to a level that is higher *by the same absolute amount* as exports, i.e., 20 million. This finding does not depend on any numerical assumption; it follows from the qualitative assumption that, apart from the need for increased money, all additional income received is respent. Thus income will continue to rise until the export surplus is eliminated.

C. The quantity of money has gradually increased by 25 million. This increase is determined by the increase in income, as derived in A above, and the assumed ratio of money to annual income (0.25). If the increase in money is related to the increase in exports, it is found—again on the two assumptions suggested in A—that

$$\text{increase in money} = \text{increase in exports} \times \frac{\text{income}}{\text{imports}} \times \frac{\text{money}}{\text{income}}$$

$$= \text{increase in exports} \times \frac{\text{money}}{\text{imports}}$$

D. Although there is no lasting improvement in the balance of payments, the fact that the adjustment of imports to the increase in

[19] The validity of this assumption is discussed in Polak and White, *op. cit.*, p. 411.

exports is lagged does produce an increase in reserves. This increase must be equal to the increase in the quantity of money, since there is assumed to be no change in the third item in the balance sheets, domestic credit.

These findings give particular importance to a "new" ratio in economics, that between money and imports. This empirical ratio is used here as an indicator of the order of magnitude of the ratio of the (marginal) desire to hold money to the marginal propensity to import. This new ratio for 48 countries, together with the component ratios for 44 countries, is given in Table 2.

It is found that the ratio varies from about one half to three (leaving out of consideration the ratio of eleven for the United States). Both the component ratios show some tendency to rise with a country's income level; but, for the ratio of money to imports itself, such a tendency, if it does exist, is not very obvious (see Appendix I).

The magnitude of the ratio makes a large difference in the reserves that a country will tend to accumulate as exports rise and also, as will be shown later, in the amount of credit it can safely create. For countries at the lower range of the scale of this ratio, an autonomous increase in exports would, by itself (i.e., if it were not accompanied by internal credit expansion), lead to an increase in money and reserves equal to something like one-half year's additional exports; for countries at the other end, the increase would be closer to two or three years' additional exports. For many countries with a ratio rather close to unity, the increase would be in the order of one year's additional exports.

Lasting autonomous reduction in imports

As suggested above, the effects of an autonomous reduction in imports can be considered, on the level of abstraction on which we operate here, as equivalent to an increase in exports. This is true independently of the character of the measures that produce the reduction in imports: increased tariff, quantitative restrictions, or exchange depreciation. Given the immediate effects of these measures on imports, the ultimate effects may be expected to be the same as those derived in the preceding section for an increase in exports of the same size. There will be the same increases in income, money, and reserves over time. The resulting increase in induced imports—approaching in magnitude the autonomous reduction in imports—implies that measures to reduce imports do not have a lasting effect on the balance of payments. They do, however, have a lasting effect on the level of income; and their temporary effect on the balance of payments during the transition period may be of great importance in restoring a country's reserve position.

TABLE 2. MEDIAN VALUES, 1950–54, OF RATIOS OF MONEY TO INCOME (MO/Y), IMPORTS TO INCOME (M/Y), AND MONEY TO IMPORTS (MO/M), BY COUNTRIES[1]

	MO/Y	M/Y	MO/M
Australia	.41	.24	1.7
Austria	.33	.22	1.5
Belgium	.53	.34	1.5
Brazil	.37	.13	2.8
Burma	.19	.21	0.9
Canada	.28	.24	1.2
Ceylon	.25	.38	0.6
Chile	.16	.10	1.6
Colombia	.20	.18	1.1
Costa Rica	...	...	0.6
Cuba	.43	.34	1.3
Denmark	.34	.31	1.1
Dominican Republic	.18	.27	0.7
Ecuador	.14	.15	1.0
Egypt	.44	.23	1.9
El Salvador	...	...	1.0
Finland	.14	.22	0.6
France	.43	.15	2.9
Germany	.23	.17	1.4
Greece	.17	.17	1.0
Guatemala	.13	.16	0.8
Honduras	.13	.27	0.5
Iceland	.28	.64	0.4
India	.19	.06	3.0
Indonesia	.09	.13	0.7
Iran	...	...	1.4
Iraq	...	...	0.8
Ireland	.33	.41	0.8
Israel	.28	.22	1.3
Italy	.40	.16	2.5
Japan	.24	.14	1.7
Mexico	.14	.13	1.0
Netherlands	.45	.50	0.9
New Zealand	.39	.31	1.3
Norway	.51	.38	1.4
Pakistan	.17	.08	2.2
Paraguay	.19	.10	1.9
Peru	.20	.29	0.7
Philippines	.15	.15	1.0
Portugal	.44	.22	2.0
Sweden	.33	.27	1.2
Switzerland	.60	.26	2.4
Thailand	.19	.22	0.9
Turkey	.22	.10	2.3
Union of South Africa	.30	.33	0.9
United Kingdom	.41	.25	1.7
United States	.44	.04	11.0
Venezuela	.21	.31	0.7

[1] Figures have been derived from data in Appendix I, Table 3. For each country, the median of the 1950–54 values was selected for the ratio of money to imports; for the two other ratios, the figures were then taken for the same year.

LASTING INCREASE IN RATE OF CREDIT EXPANSION

Assume that credit expansion by the banking system, which in previous years had been zero, is brought to 5 million a year. It is assumed[20] that the full 5 million is spent by the borrowers to pay out as income, e.g., in connection with investment activities or government deficit spending. The initial and the ultimate income effect is here the same as that of an increase in exports of the same magnitude. The effects on imports and money—both being related to income—are also the same. The effects on reserves, however, are totally different, as the negative effect of additional imports is not offset by a positive effect of increased exports. There will be a continuous loss of reserves, which will gradually build up to an annual rate equaling the injection of credit—the quantity of money approaching a constant.

In the transitional period while this equilibrium rate is being approached, however, the loss of reserves will be smaller than the total credit expansion by an amount which, on the basis of the figures for the money-import ratio used above,[21] would be somewhere between six months' and three years' credit expansion, depending on the country. To that extent the additional income injected by credit expansion will have been saved in the form of money to handle the higher level of income; for the remainder of the credit expansion, the increase in domestic assets has been offset by a loss in foreign assets.

It follows from our system that, as income approaches the new equilibrium level, the quantity of money also approaches its corresponding equilibrium level, based on the specified ratio of money to income; no further condition is necessary to bring income and money in line. This also entails that no further additional condition on income and money is possible without disrupting the assumption of a constant velocity of money. On this account, the assumption made earlier that all credit expansion is spent is a *necessary* assumption.

Suppose, for a moment, that this assumption would not be fulfilled, and that those who borrow 5 a year systematically spend only 3, keeping the remainder as additional cash balances in anticipation of the needs of larger business. The multiplier process would then start with 3 instead of 5 as the multiplicand, and income would build up to 15 rather than 25. Money corresponding to an income of 15 would be added to the public's holdings, but in addition borrowers would be putting aside an extra 2 every year. Thus after, say, five years, income would have risen by approximately 15, and money not by about 3.75, but by $3.75+(5\times2)=13.75$. The marginal velocity of circulation over

[20] This is a necessary assumption; see below.

[21] Assuming marginal propensity to import equals average propensity to import.

the five-year period would appear as slightly over 1, against a previous average of 4.

Thus the assumption of full spending of credit creation is a necessary corollary of the assumption of constancy of the velocity of circulation. This does not mean, of course, that it must be assumed that individual borrowers spend all their borrowings. But deviations of individuals in one direction must be offset by deviations of other individuals in the opposite direction if the basic assumption of a constant income-money ratio is to remain valid.

Discontinuous changes in autonomous variables

In view of the similarities found for the effects of lasting changes in different autonomous variables, the effects of a discontinuous change in these variables may be discussed briefly.

The effects follow simply from well-known multiplier propositions.[22] A discontinuous autonomous increase in income (from exports, import restrictions, or credit expansion) will lead to a temporary expansion in income that will gradually subside. The *aggregate* increase in income, *over time,* will equal the autonomous increase divided by the marginal propensity to import. The quantity of money will first increase along with income, then decline to its original level. Aggregate imports over time will equal the value of the autonomous increase. If the autonomous factor is an increase in exports, or import reduction, reserves will first increase and then return to their original level; if it is credit expansion, reserves will decline over time by an amount equal to the credit expansion.

In arriving at this last conclusion, no account has been taken of the effect of an increase in one country's imports on the income of the rest of the world and thereby on its own exports. It will easily be seen that the omission of this further refinement is of negligible significance for all countries except the United States. It is true that, if we adhere strictly to our assumptions, not all the money created by credit expansion in country A can flow out through additional imports. The outflow will stop when a new equilibrium situation is reached, in which the money supply of the rest of the world will have increased in the same proportion as in A. Country A will then have a slightly higher income than before the credit expansion and correspondingly higher imports, which will be offset by an equal increase in exports as income abroad is also slightly higher. Thus A would, in the end, not lose *all* of its credit creation in reserves, but a fraction less. The magnitude of this

[22] See, for example, Fritz Machlup, *International Trade and the National Income Multiplier* (Philadelphia, 1943).

fraction would be the ratio of its money supply to the money supply of the whole world. For the United States, which has about 60 per cent of the world's money supply, this correction is important. But next in order are the United Kingdom, which has only about 7 per cent of the world's money supply, and France, which has 5 per cent. There are only a few other countries for which the correction would be as much as 2 per cent.[23]

Pattern of income, money, and imports over time

As shown in the preceding sections, the effect of each of the three autonomous factors on income, money, and imports is the same. Changes in each of these variables may therefore be understood as a function of the sum of changes in exports, in import restrictions (measured numerically as the amount of imports kept out by price, exchange rate, or prohibitive measures), and in credit expansion.

The effects of these autonomous variables are most conveniently derived from the findings on discontinuous changes. The patterns of exports, import restrictions, and credit expansion may be seen as a set of autonomous causes that vary discontinuously over time and whose fluctuations determine the rate of income and imports, stocks of money, and reserves at any moment of time. Income, money, and imports depend positively on the *sum* of the three variables, exports, import restrictions, and credit expansion.

Since the process of adjustment takes time, the fluctuations in income, imports, money, and reserves will lag behind those of the autonomous variables. Income during any period is thus a weighted average of the current and past values of the sums of the autonomous variables, with the sum of the weights equaling $\frac{1}{\text{marginal propensity to import}}$. The value of imports is a weighted average of the current and past values of the sums of the autonomous variables, with the sum of the weights equal to 1. The magnitude in terms of years of the average lag of income and imports depends on the marginal propensity to import and on the velocity of circulation of money. The greater these two parameters, the smaller the lag. A method for computing this lag is derived in Appendix II. Application of this method shows that, for plausible values of the two parameters, the lag may run from half a year to well over a year. This theoretical finding is well in accordance with empirical observations frequently made in dealing with problems of financial policy:

[23] Based on 1952 figures taken from "The Dollar Value of the World's Money Supply," *International Financial Statistics* (Washington), July 1953, pp. vi-viii.

1. An expansion of exports during a substantial period tends to produce a rate of reserve increase that is not maintained thereafter; if actions are taken on the assumption that the export surplus will persist (e.g., in the form of credit expansion), serious balance of payments difficulties may arise.

2. Credit creation will have its full effects on a country's reserves only over a considerable time; in the early stages, the effects may appear both minor and harmless.

3. Measures to combat payments problems by means of restriction of credit expansion will normally become effective only slowly and gradually.

The change in reserves equals current exports minus the weighted sum of past values of the autonomous variables, with the sum of the weights equaling 1. The stock of money depends on the weighted average of the sum of the autonomous variables, with the sum of the weights equal to $\frac{a}{m}$ (equals the ratio of money to imports if the marginal propensity to import equals the average propensity). Reserves are equal to the stock of money minus the total credit expansion. These relationships are summarized in Table 1.

Discussion of some of the conclusions reached

It may be useful to check the conclusions reached against some of the literature on the subject. The first observation is that the balance of payments conclusions are substantially those of the classical economists. The existence of an equilibrating mechanism by which an increase in exports produced its own offset, and the proposition that an increase in money beyond the proper quantity would be drained off through purchases of gold and silver, were, indeed, among the most essential of their findings.

But the classical economists did not typically study the details of these processes over time, through variations in income, imports, money, and reserves. Nor did they have the equipment to arrive at numerical magnitudes—or, more modestly, orders of magnitude—for the changes that could be expected in the course of these processes. For these reasons alone, a somewhat more precise restatement of the classical tenets, in a more modern form, may be appropriate.[24]

Another justification may be found in the alarming naiveté so often

[24] A nonnumerical discussion of the process that follows an expansion of exports is given by E. M. Bernstein in "El Precio del Café y la Política Monetaria" ("The Price of Coffee and Monetary Policy"), *El Trimestre Económico* (Mexico, D.F.), Vol. 17 (1950), pp. 416–38. The conclusions reached there are the same as those of this paper.

found in analytical studies of particular countries. When such studies deal with past events, they all too often show surprise that an increased flow of exports, which produced a large balance of payments surplus the first year that it occurred, does not continue to produce such a surplus in later years. When a country is running a balance of payments deficit, it is far too often believed that any measure or event that will increase exports or decrease imports (oil discoveries, higher world market prices, the entry into production of some import-replacing industry, etc., etc.) will by itself relieve the deficit. The correct view, according to our conclusions, is that these events will by themselves produce a *temporary*, but not a *lasting*, improvement in the balance of payments. They will, of course, produce a lasting increase in the country's income. This increase will, at least in part, be an increase in real income, depending on the elasticity of supply; to that extent, it may facilitate taking the additional measures necessary to eliminate the deficit permanently. If, for example, the deficit was due to an unbalanced government budget, a higher national income may make it easier to raise taxes and thus to eliminate the payments deficit via the elimination of the budget deficit.

The same line of reasoning will indicate that the belief that import restrictions can correct a balance of payments deficit is inaccurate, unless there is evidence that these restrictions will lead to a specific increase in saving, e.g., if the restrictions are known to be temporary. As shown above, such restrictions will have an initially favorable effect on the payments situation, which will disappear reasonably soon as the effects through the expansion of income make themselves felt. If restrictions were to have the same effective restrictive effect in terms of the value of the commodities kept out, they would have to be continually made more severe as the effectiveness of earlier restrictions wore off.

With respect to the effects of credit creation on the balance of payments, the classical views are not commonly heard at present. The opinion recently expressed by E. M. Bernstein that for "a country like the Philippines, which constitutes a very small part of the world monetary economy, . . . it can be said with approximate accuracy that an inflation of 100 million pesos [1 peso = US$0.50] will result in a balance of payments deficit equivalent to US$50 million,"[25] does not, it is believed, reflect a point of view commonly held in the profession. According to the above analysis, this opinion is correct even without the conditions specified in the text, viz., that there is full employment and

[25] E. M. Bernstein, "Strategic Factors in Balance of Payments Adjustment," *Staff Papers*, Vol. V (1956–57), pp. 153–54.

that the rise in prices is proportional to the increase in the quantity of money.[26]

Two prevailing schools of thought will, however, come up with different answers: both those who discuss expansion in terms of the multiplier and those who put their faith in an approach through the income velocity of money. The former group tends to take it for granted that there is, in any system, some marginal nonspending, i.e., marginal saving in forms other than money that does not lead to expenditure by someone else, as a result of which, obviously, not the whole credit expansion would eventually find its way into imports. But the question is whether there is indeed such marginal nonspending; as we have seen, there can be none, after the adjustment period, if the velocity of circulation is a constant.

It is perhaps a little more surprising that most approaches based on the quantity theory also manage to come to conclusions that are wrong or at least without applicability. The error—not a logical but a practical error—is due to the tendency to base these analyses implicitly or explicitly on a closed economy. This simplification is far more serious in velocity analysis than in multiplier analysis. In the latter, it is equivalent to disregarding one out of a number of "leaks" which are a function of income; the others, such as savings and taxes, are being allowed for. The numerical results are thus in the right direction, although they are too large. But to ignore imports in velocity analysis is to overlook the one and only leak there is in the system. Hence the conclusions are not only quantitatively, but also qualitatively, wrong. It is inferred that a single injection of credit leads to a lasting increase in income,[27] and that continuous injection of the same amount of credit

[26] The additional condition of a fixed rate of exchange is necessary in the sense that any regime under which the balance of payments adjusts itself automatically through changes in the rate excludes the possibility of a balance of payments deficit by assumption.

[27] A recent example is found in De Nederlandsche Bank, *Report for the Year 1954* (Amsterdam, 1955), p. 65: "If as the result of inflationary impulses economic activity increases, or prices and incomes rise, or if in a word such impulses enlarge the national income, then the cash requirements of the households taking part in transactions will inevitably also become greater. This greater need for cash will be met through a part of the income received not being spent. . . . In the conditions existing in the Netherlands, the extent to which money becomes 'fixed' in cash holdings is of the order of 30 per cent of the increase in the annual national income. From another point of view this means that an inflationary impulse, provided that it does not lead to a balance of payments deficit—in which case newly created or activated money would disappear from circulation and cease to produce any stimulating effect on the domestic economy—and provided that the impulse is not offset by a deflationary impulse elsewhere, will continue to produce its inflationary effect until such time as increased activity or price rises have produced an 'income effect' amounting to roughly three times as much as the impulse. The point is that each addition to income tends when it is spent to cause fresh additional income to arise; and only the fact that a part of each fresh addition to

per period leads to an ever increasing rate of income.[28] Both types of conclusions are based on a monetary multiplier equal to the inverse of the velocity of circulation. They fail to see that for open economies the income velocity approach cannot lead to conclusions that are even in the qualitative sense correct without being spliced on to income analysis; and that, when this is done, the ultimate value to which income approaches does not depend on the velocity of circulation at all, but only on the marginal propensity to import.

It is true that, by basing the analysis not on a given expansion of credit but on the assumption of a fixed increase in the quantity of money, velocity conclusions can be recast in a form that is formally correct. But since imports subtract from this quantity of money, the assumption implies, for an open economy, a continual offsetting of imports by new credit expansion.[29]

This brings us to the applicability of the quantity theory of money. Its weakness is not so much the assumption of a constant V, an assumption which, at least for the less developed countries, is probably as good as that of the constancy of any other coefficient. Nor do difficulties arise from the side of P and T; for the purpose of studying payments problems, the extent to which credit expansion leads to an increase in prices and the extent to which it leads to a rise in real income may not make too much difference. The basic difficulty, it would seem, is with M itself.[30] For an open economy, an increase in M, unlike credit

---

income is left unspent so as to meet the greater need for cash due to the rise in income prevents the inflationary impulses from producing a constantly extending cumulative effect. In any inflationary process therefore we should always find an increase in cash holdings, expressed in the form of an accumulation of primary liquid resources."

Although one of the two reservations made envisages the possibility of an induced balance of payments deficit, this complication is not pursued, and a quantitative conclusion for the Netherlands is reached on the basis of the quantity theory. In a journal article, however, Dr. Holtrop indicates explicitly that the "monetary multiplier" (i.e., the inverse of the velocity of money) applies only in a closed economy. In an open economy one also has to take account of the import leak, "as a result of which the remaining income effect would become smaller and smaller, ultimately vanishing when the cumulative balance of payments effect will have equaled the value of the initial inflationary impulse." (M. W. Holtrop, "The Interpretation of Monetary Phenomena" [in Dutch], *Economisch-Statistische Berichten* (Rotterdam), Vol. 39 (1954), p. 994.

[28] S. C. Tsiang, "Liquidity Preference and Loanable Fund Theories, Multiplier and Velocity Analyses: A Synthesis," *American Economic Review* (Menasha, Wisc.), Vol. 46 (1956), p. 563. After reaching this conclusion, the author recommends velocity analysis for the study of development problems in underdeveloped countries—which surely are not typically closed economies—while sounding a warning against the use in such cases of the multiplier method whose conclusions are considered to be "dangerously misleading."

[29] The validity in this form is equivalent to that meaningless way in which the multiplier can always be shown to be exactly equal to the ratio of income to investment.

[30] In this paragraph, M stands for money, which elsewhere in this paper is indicated as MO.

expansion, is not a useful autonomous variable to take as the multiplicand, because through the multiplier process an autonomous increase in M leads to a subsequent reduction of the same magnitude in M.

IV. Conclusions on Financial Policy

Long-run expansion of internal credit by monetary system

The analysis in Part III can be used to derive an estimate of the amount of internal credit expansion by the monetary system which an economy can afford. It should be stressed that the estimate refers not to credit expansion in general but only to credit expansion by the monetary system. The total new credit that can be extended in an economy depends on (1) the amount of income saved and (2) the extent to which saving is channeled into investment through credit institutions. The amount of new credit extended per year can be enlarged by increased saving or by an increased use of credit intermediaries. Accordingly, there is no narrow limit beyond which total credit cannot expand; and, on the whole, an increase in credit indicating increased saving, or even an increased use of intermediaries of a given amount of saving, is likely to be a healthy sign.

The situation is different, however, for saving through the monetary system, insofar as this saving takes the form of increased holdings of money. Since, with a constant velocity of circulation, money cannot increase faster than output without a rise in prices, and since price increases are generally not desired, more than a moderate amount of saving in the form of money is, on the whole, an unhealthy sign.[31]

The distinction between an unhealthy expansion of credit that leads to too large an increase in money and a healthy one that is indicative of an increased flow of savings into financial intermediaries is necessarily somewhat tenuous. The difficulty arises from the inevitable arbitrariness of any definition of money which draws a sharp line between money and what is called quasi-money in *International Financial Statistics*—assets which, unlike money, are used primarily as a store of value but, because of the ease with which they can be turned into money, perform some of the functions of precautionary balances, and perhaps even of the less active part of transactions balances. There is no satisfactory way to avoid this difficulty.

But it is made serious both in substance and in the treatment of the

[31] An important exception is a period of currency stabilization when the velocity of circulation is suddenly reduced and the economy can absorb a large quantity of money without inflationary effects.

problem at hand if the same institutions that have large monetary liabilities also owe large quasi-monetary liabilities. It complicates the problem of substance, because the possibility of having both money and quasi-money (e.g., a checking account and a savings account, or a sight deposit account and a time deposit account) in the same bank tends to increase the ease of transfer from money to quasi-money and thus to blur further the line of distinction between the two.

At the same time, the distinction between the monetary system and other financial intermediaries becomes blurred. Where, as in France, the deposit banks have virtually no nonmonetary deposits, that distinction is easy. But where, as in Germany, the deposit banks have time deposits twice the size of their sight deposits and bonds outstanding in an amount equal to their sight deposits, the distinction between the monetary system and other intermediaries cannot be made on an institutional basis.

The fact that a community holds, in addition to money, large amounts of quasi-money is an important economic factor, both as to its causes and as to its effects. But whether the public holds these quasi-monetary assets in the commercial banks or in other institutions is primarily an institutional question, which is of a much lower order of importance. In the theoretical approach that is used in this paper it seems proper, therefore, to make a distinction by economic categories rather than on an institutional basis. Accordingly, we discuss the ability to expand internal credit not of the empirical *banking* system of each country, but of its *monetary* system. The latter is defined, in balance sheet terms, as all the liabilities of the central bank plus the monetary liabilities of the commercial banks and any other institutions that may have such liabilities (e.g., the postal checking system in some European countries). The asset side of the balance sheet is represented by all the net foreign assets of the institutions covered plus the amount of their domestic assets that is required to add up to the total of monetary liabilities. The remaining domestic assets are notionally split off as if they were held by some savings banks which also owe the corresponding amount of nonmonetary liabilities.

With respect to the monetary system, it was found in Part III that every credit expansion leads ultimately to a corresponding loss in reserves. From this, it might seem to follow that a country could not afford any permanent expansion of internal credit without endangering its balance of payments. To prevent a lasting deterioration in the balance of payments, any credit expansion in one period would, it might seem, have to be offset by a credit contraction in a later period. On closer analysis it will be clear, however, that this conclusion is not generally correct. We have seen that a lasting expansion in the rate of

exports will lead to an increase in reserves. If the country is willing to forego part of this increase in reserves, it can afford a secular expansion of credit for every secular expansion in exports.

But should not reserves also increase secularly as exports and imports go up? Yes, they should; but the reserve increase that comes about automatically without credit expansion as exports increase is normally larger than the country would require in relation to that expansion of its trade. The automatic increase in reserves associated with any increase in exports would be equal to that increase times $\frac{\text{quantity of money}}{\text{imports}}$. For most countries this ratio is in the order of 1 or more. Countries do not, however, typically hold reserves equal to a year's exports (or imports); as exports increase, they do not need to add a full year's increase to their reserves. On the basis of a very cursory inspection of the ratios of reserves to imports of many countries of the world, it would seem that reserve ratios of the order of 50 per cent were found to be adequate by many countries, and smaller ratios by some. Where, then, export increases would by themselves tend to build up reserves by more than this, the country could afford to exchange part of its increase in reserves for domestic capital goods by means of credit expansion.

For some countries, however, where imports are a very large proportion of domestic variables (e.g., national income and the quantity of money), the ratio of money to imports may approach the desired ratio of reserves to imports. In a few countries shown in Table 2, the ratio of money to imports approaches 0.5; if these countries wanted to hold reserves of the order of 50 per cent of imports, they would not be able to afford any significant internal credit expansion, however much their exports might increase.

In general terms, the ratio of domestic assets to foreign assets of the banking system that an economy can afford, as a long-run proposition, is indicated by the formula

$$\frac{DA}{R} = \frac{a}{km} - 1$$

where a = ratio of money to income
m = ratio of imports to income
k = the desired ratio of reserves to imports.[32]

[32] If R represents reserves, desired reserves are $R = kmY$. Since

$$DA = MO - R = (a - km)Y,$$

$$\frac{DA}{R} = \frac{a - km}{km} = \frac{a}{km} - 1.$$

Thus a country where $\frac{a}{m}=3$ can, on this basis, have adequate reserves and yet an internal credit expansion five times its foreign exchange reserves, if k is taken at 0.5.

With the same numerical degree of "reserve adequacy," a small underdeveloped country with a large import ratio and a high velocity of circulation can afford much less credit expansion. For $m=0.3$, $a=0.2$ (velocity$=5$), and $k=0.5$, the ratio becomes 1/3, or the ratio of domestic credit to money becomes 1/4. This agrees with the finding of E.A. Birnbaum that, for small underdeveloped countries with reserves that seemed adequate, the reserves were in the order of two thirds of the money supply, so that only one third of the money supply was matched by domestic credit.[33]

Cyclical variation of credit expansion

The preceding section set the limits for credit expansion in the long run. In the shorter run, in response to fluctuations in exports, the measure of the proper expansion of credit is more ambiguous, since the objectives of internal and external stability are likely to come in conflict. When export proceeds are cyclically high, considerations of internal stability and the prevention of inflation might require a reduction in credit expansion below the long-run normal; but balance of payments considerations would permit a larger than normal credit expansion. Similarly, in a depression, internal considerations would lead to an offsetting policy, while balance of payments reasons might necessitate a reduction in internal credit expansion.

There is, therefore, no single objective short-run test for a proper credit policy in response to cyclical variations, even on the assumption that cyclical variations in exports can be distinguished from long-run changes. To the extent to which they consider offsetting policies possible or desirable, countries can reasonably have different attitudes. Some may be willing to have external fluctuations permeate their economies, riding high on high tides—hoping perhaps that these may prove to be a lasting rise in level rather than a mere cyclical wave—and, if disappointed by a return of low tides, go through a period of restriction. Other countries may prefer to put primary emphasis on the stabilization of the internal economy, accumulating reserves in good years and running them down in bad years.

[33] Eugene A. Birnbaum, "The Cost of a Foreign Exchange Standard or of the Use of a Foreign Currency as the Circulating Medium," *Staff Papers*, Vol. V (1956–57), pp. 477–91, in particular, Group III in his Table 2. The same paper also shows that, for countries in this position, the ratio of foreign exchange to currency alone exceeded 100 per cent so that there was, in the long run and in retrospect, no economy for them in using a currency of their own.

The maximum extent to which a policy of riding with the tide could reasonably be pursued would be to expand credit on the assumptions that (1) the increased level of exports would persist, but (2) the increase in reserves corresponding to a higher level of trade should be accumulated. The total credit expansion permissible on this basis is $\left(\frac{a}{m}-k\right)$ times the increase in exports; for $\frac{a}{m} \cdot \triangle$ exports is the reserve increase that will take place in the absence of credit expansion, and k is the desired reserve ratio (in terms of exports or imports) that should remain after credit expansion.

V. Changes in Ratio of Money to Income

Introduction

The preceding analysis has been based entirely on the assumption of a constant ratio of income to money. The analysis should now be broadened by allowing explicitly for other factors that may also play a role in determining the holdings of money, and whose changes will therefore be reflected in changes in the ratio of money to income.

Changes in this ratio may be attributable to two sets of causes: (1) changes in factors, other than income, which affect the desirability of holding money; (2) changes in the (opportunity) cost of holding money, i.e., in the rate of interest. The first might be considered shifts of a demand curve for money (at constant levels of income); the second, movements along such a demand curve in response to changes in interest rates.

Other demand factors

Changes of the type listed in the first group appear to occur frequently in the short run, particularly in response to sudden large purchases or sales of assets by the banking system. A large increase in exports or a large government deficit may increase the quantity of money more than in relation to income, as decisions to spend the larger income, either at home or for imports, are delayed. A large reduction of money, e.g., through an increase in inventories of imports or through capital flight, may lead to an increase in velocity as the economy continues its normal rate of current expenditure in spite of the inadequacy, by normal standards, of its cash balances. For some of the countries, the data in Chart 1 and Appendix I, Table 3, show changes in velocity that are probably due to such causes. Thus the very large export in-

creases related to the Korean war produced high ratios of money to income at the end of 1951 in Australia and Pakistan. A large import of short-term capital brought about a high ratio in Mexico in 1950. A speculative wave of importing in the same period explains the declines in the ratios in Germany and the Netherlands at the end of 1951. But these deviations from a more normal relation between income and money apparently do not last.[34] As the figures for the countries mentioned indicate, velocity returned to normal in a relatively short period.

Insofar as these demand factors are of a temporary character, the conclusions reached earlier in this paper would continue to be valid *except with respect to their timing*. Thus, if a large increase in exports leads to a temporary increase in the willingness to hold money (compared with income), income and imports will initially rise less, and money and reserves more, than would have been expected. But when the relationship of money to income returns to normal, these discrepancies will disappear.

It would seem that, generally, these other demand factors operate as a moderating force on both expansionary and contractionary processes. Even without changes in velocity there are difficulties of analysis and economic policy owing to the fact that the effects of these processes tend in any case to be lagged. Insofar as fluctuations in the velocity of money increase this lag, they may make proper analysis and proper policy even more difficult. Credit expansion may then proceed even longer, without much effect on the balance of payments. High export prices may lead to an even more impressive accumulation of reserves. Thus policies may be continued in the first case, or initiated in the second case, that are more inflationary than the economy will be able to stand when the normal velocity returns. Similar difficulties of interpretation may lead to excessively deflationary policies in other situations. Thus an import boom may temporarily continue even though cash balances have been reduced well below normal. In such a situation, additional deflationary measures to protect the reserves may seem necessary (in particular when the reserves have been decreased to a very low level and no secondary reserves are available), although it may be expected that the process may reverse itself as cash balances are restored to normal.

The policy issues involved are made more difficult in both inflationary and deflationary situations by the ever present possibility that the ratio of money to income *may* have changed permanently. After all, these ratios are, as we have seen, quite different for different coun-

[34] M. W. Holtrop, "Method of Monetary Analysis Used by De Nederlandsche Bank," *Staff Papers*, Vol. V (1956–57), p. 307.

tries; and they have changed for individual countries over time,[35] although usually only slowly.

Changes in response to rate of interest

In most of the less developed countries, the transition from money to other assets is fairly abrupt. On the one hand there is money; on the other hand there are real assets—land, buildings, stocks of international goods, perhaps gold and foreign balances. There is little in between. Treasury bills, government bonds, prime industrial bonds, readily marketable shares—all these assets that form the transition between money and real assets in countries with fully developed financial systems play a minor role in the asset structure of most of the less developed countries. Money is held for one purpose, transactions; real assets are held as the store of value. There may be occasional fluctuations in the holdings of money for the reasons discussed in the preceding section. But there is little room for short-run changes between money and real assets on the basis of changes in the rate of interest. In fact, in such countries there usually is no true market—neither a money market nor a capital market—in which a rate of interest is formed by the interplay of demand and supply forces.

The situation is different in the developed countries, where there is a continuous range of other assets yielding interest at the expense of liquidity. Here, moreover, money holdings are normally rather large, compared with income, giving more room for adjustments in response to the opportunity cost of holding money. In these circumstances, it seems logical to expect a reasonably clear influence of the interest rate factor on cash holdings in addition to the influence of income. In a recent unpublished study by William H. White, strong evidence that the velocity of circulation responds to changes in interest rates was found for six developed countries: Canada, Denmark, Sweden, Switzerland, the United Kingdom, and the United States. The relationship was found to be less close, but still present, for eight other countries: Australia, Belgium, Brazil, India, Mexico, the Netherlands, Norway, and Uruguay. Some of these, it will be noted, are less developed countries. Of the countries for which data are available, three—Chile, France, and Peru—did not show a relationship between interest and velocity.[36]

[35] In Germany, for instance, the velocity declined sharply in the pre-1914 period. See Ernest M. Doblin, "The Ratio of Income to Money Supply: An International Survey," *Review of Economics and Statistics* (Cambridge, Mass.), Vol. 33 (1951–52), pp. 201–13, and *International Financial Statistics* (Washington), November 1951.

[36] Clear evidence of the relationship for South Africa has been brought forward in a recent article by Dr. G. de Kock, "Die Verhouding van die Volksinkome tot

Changes in velocity are equivalent in their effect to injections into or subtractions from the income stream. Therefore, in circumstances where the velocity depends on the rate of interest, it is necessary to take changes in interest rates into account both for analytical and for policy purposes.

In studying the interest rate mechanism it is necessary to distinguish between the central bank and the commercial banks. The creation of credit by the central bank depends on its own decision (sometimes, to be true, taken under pressure); the size of the creation of credit by the commercial banks is normally left to their discretion, the central bank influencing the degree of ease or stringency of the commercial banks by means of its net purchases of exchange, its own credit expansion, its open market operations, and changes in reserve requirements. While these supply conditions affect the willingness of the banks to lend at different interest rates, demand conditions, such as business activity and profit expectations, affect the desire to borrow at different interest rates. The interplay of these demand and supply factors determines, at the same time, the amount of credit creation and the rate of interest.

If the central bank desires to change the amount of credit expansion by the whole banking system, this will normally lead to a change in the rate of interest (unless the supply and demand factors adjust themselves or are adjusted in such a manner as to make this unnecessary). By itself, a contractionary policy will lead to a rise in the rate of interest, an expansionary policy to a fall in the rate. But these changes in the rate will tend to induce changes in money holdings that will in part neutralize the initial policy.

Assume that in a particular situation it is felt necessary to reduce the additions to the income stream originating in the monetary system from 600 last year to 200 this year. To bring this about in the face of a constant or rising demand for credit, the reserve positions of the banks are tightened and the rate of interest rises. Now, insofar as businesses and consumers reduce their ratio of cash balances to turnover because of the high cost of money, the intent of the monetary authorities is frustrated. Assume, for instance, that, in response to the increase in the rate of interest for the total quantity of money of 2,000 million, the velocity of circulation is increased by 10 per cent. This is equivalent in its effect on income to a credit injection of 200 million. Thus the net effect on income achieved by the authorities is only half what was intended, and also only half the amount that the figures on credit expansion and the money supply might lead one to believe had,

---

die Geldvoorraad in Suid-Afrika, 1917–54," *South African Journal of Economics* (Johannesburg), Vol. 23 (1955), chart on page 201. See also "Money Supply and National Income: The Income Velocity of Money and the Rate of Interest," *International Financial Statistics* (Washington), November 1951, pp. iii-v.

in fact, been achieved. In the face of the interest elasticity of demand for money in this imaginary country, the authorities would have had to tighten the reserve position of the commercial banks considerably more to achieve the desired *net* effect on income creation.

Changes in the velocity of circulation, whether resulting from changes in demand factors or from changes in the rate of interest, will have to be taken into account in the explanation of income and imports. For this purpose, they will have to be treated as equivalent to an increase in the quantity of money at constant velocity. But there is room for a certain difference in expectation when the change in velocity is due to a variation in interest rates, compared with the situation in which it is attributable to a change in demand factors. For when velocity has risen in response to an increase in the rate of interest, the change may be expected to be lasting as long as the rate remains high, while changes in velocity not attributable to changes in interest seem to have a tendency to reverse themselves.

APPENDICES

I. Note on the Ratio of Money to Imports

As indicated in the text, the ratio of money to imports plays an important role in our conclusions. This ratio is itself composed of two ratios: that between money and income and that between imports and income. The three ratios for 44 countries in the period 1950–54 are given in Table 3. For 4 more countries for which suitable national income data were lacking, only the ratio of money to income is entered.

For the majority of countries, the ratio of money to imports shows a considerable measure of stability from year to year. But the differences between countries are very large—from about 0.5 at the one extreme (Costa Rica, Finland, Honduras, Iceland) to 2.5 to 3 at the other (Brazil, France, India, Italy), not counting the ratio of 11 for the United States. These differences are obviously not due to arbitrary factors, and it would seem tempting to look for an explanation that would reduce them to some typical characteristics of the countries in question. That much cannot be achieved in this paper, but a few observations on the data may be helpful for future research.

Any explanation should go back to the two component ratios—money to income and imports to income. Both are well-known ratios, each with a name of its own in economics: the "income velocity of money" (the name applies to the inverse of our first ratio) and the "average propensity to import." But surprisingly little has been done to explain the international differences in these structural coefficients. Two studies may be mentioned: one by E. M. Doblin on the ratio of money to income[37] and one by Tse Chun Chang on the ratio of imports to income.[38] Each adduces evidence that the particular ratio under study increases as one moves from countries with low real income to countries with higher real income.[39]

[37] Ernest M. Doblin, *op. cit.*

[38] Tse Chun Chang, "International Comparison of Demand for Imports," *Review of Economic Studies* (London), Vol. 13 (1945–46), No. 34, pp. 53–67.

[39] Doblin also shows that the ratio of money to income in the same country increases over time, presumably because income rises. However, the ratio of

TABLE 3. RATIOS OF MONEY TO INCOME (*MO/Y*), IMPORTS TO INCOME (*M/Y*), AND MONEY TO IMPORTS (*MO/M*) FOR 48 COUNTRIES, 1950–54[1]

	Ratio	1950	1951	1952	1953	1954
Australia[2]	*MO/Y*	.41	.44	.39	.41	.40
	M/Y	.24	.34	.25	.17	.21
	MO/M	*1.7*	1.3	1.6	2.3	1.9
Austria[2]	*MO/Y*	.33	.30	.29	.36	.40
	M/Y	.22	.25	.22	.21	.24
	MO/M	*1.5*	1.2	1.3	1.7	1.7
Belgium-Luxembourg[2]	*MO/Y*	.53	.50	.50	.51	.50
	M/Y	.32	.36	.34	.33	.34
	MO/M	1.6	1.4	1.5	1.5	*1.5*
Brazil	*MO/Y*	.38	.37	.37	.37	.34
	M/Y	.10	.15	.13	.07	.13
	MO/M	3.9	2.4	*2.8*	4.9	2.8
Burma	*MO/Y*	.20	.19	.18	.19	.22
	M/Y	.16	.21	.23	.21	.25
	MO/M	1.3	*.9*	.8	.9	.9
Canada[2]	*MO/Y*	.34	.29	.28	.27	.29
	M/Y	.25	.27	.24	.25	.24
	MO/M	1.4	1.1	*1.2*	1.1	1.2
Ceylon	*MO/Y*	.26	.25	.23	.21	.23
	M/Y	.33	.38	.44	.40	.33
	MO/M	.8	*.6*	.5	.5	.7
Chile[2]	*MO/Y*	.16	.17	.17	.18	.15
	M/Y	.10	.13	.12	.09	.06
	MO/M	*1.6*	1.3	1.4	2.1	2.4
Colombia	*MO/Y*	.18	.18	.19	.20	.21
	M/Y	.13	.16	.15	.18	.19
	MO/M	1.4	1.1	1.3	*1.1*	1.1
Costa Rica	*MO/M*	.6	.6	*.6*	.6	.7
Cuba[2]	*MO/Y*	.41	.40	.43	.48	.48
	M/Y	.34	.36	.34	.31	.31
	MO/M	1.2	1.1	*1.3*	1.6	1.6
Denmark[2]	*MO/Y*	.35	.34	.34	.33	.32
	M/Y	.31	.35	.31	.31	.34
	MO/M	1.1	1.0	*1.1*	1.1	.9
Dominican Republic	*MO/Y*	.15	.18	.19	.17	.18
	M/Y	...	.27	.31	.27	.24
	MO/M	...	*.7*	.6	.6	.8
Ecuador	*MO/Y*	.15	.13	.14	.14	.15
	M/Y	.12	.15	.15	.15	.22
	MO/M	1.2	.9	1.0	*1.0*	.7
Egypt	*MO/Y*	.44	.40	.46	.43	...
	M/Y	.23	.24	.26	.21	...
	MO/M	*1.9*	1.6	1.7	2.1	2.2

TABLE 3 (*continued*). RATIOS OF MONEY TO INCOME (*MO/Y*), IMPORTS TO INCOME (*M/Y*), AND MONEY TO IMPORTS (*MO/M*) FOR 48 COUNTRIES, 1950–54[1]

	Ratio	1950	1951	1952	1953	1954
El Salvador	*MO/M*	1.1	.9	*1.0*	1.0	.9
Finland[2]	*MO/Y*	.16	.16	.14	.14	.14
	M/Y	.22	.25	.30	.20	.22
	MO/M	.8	.6	.5	.7	*.6*
France[2]	*MO/Y*	.43	.42	.40	.43	.46
	M/Y	.15	.18	.14	.13	.13
	MO/M	*2.9*	2.4	2.8	3.4	3.6
Germany[2]	*MO/Y*	.23	.21	.22	.23	.23
	M/Y	.16	.16	.16	.15	.17
	MO/M	1.5	1.3	1.3	1.5	*1.4*
Greece	*MO/Y*	.16	.16	.17	.18	.20
	M/Y	...	...	.17	.17	.21
	MO/M	...	...	*1.0*	1.0	.9
Guatemala	*MO/Y*	.14	.13	.13	.16	.16
	M/Y	.17	.18	.16	.16	.18
	MO/M	.8	.8	*.8*	1.0	.9
Honduras	*MO/Y*	.11	.11	.12	.13	.14
	M/Y	.21	.26	.31	.27	.25
	MO/M	.5	.4	.4	*.5*	.6
Iceland[2]	*MO/Y*	...	.26	.24	.28	.26
	M/Y	.44	.62	.55	.64	.58
	MO/M	...	.4	.4	*.4*	.4
India	*MO/Y*	.19	.18	.17	.16	.19
	M/Y	.06	.09	.08	.05	.06
	MO/M	3.3	2.1	2.1	3.0	*3.0*
Indonesia	*MO/Y*	...	.07	.08	(.09)[3]	...
	M/Y	...	.14	.13	(.13)[3]	...
	MO/M	.9	.5	.6	*.7*	1.2
Iran	*MO/M*	1.4	*1.4*	1.8	1.3	...
Iraq	*MO/M*	1.3	.9	.7	.7	*.8*
Ireland	*MO/Y*	.35	.36	.34	.33	.34
	M/Y	.46	.55	.42	.41	.40
	MO/M	.8	.6	.8	*.8*	.8
Israel[2]	*MO/Y*	.54	.43	.31	.28	.24
	M/Y	.29	.23	...	.22	.30
	MO/M	1.9	1.8	...	*1.3*	.8
Italy[2]	*MO/Y*	.37	.37	.40	.40	.41
	M/Y	.13	.17	.18	.16	.16
	MO/M	2.7	2.2	2.3	*2.5*	2.6
Japan	*MO/Y*	.23	.23	.24	.24	.24
	M/Y	.10	.16	.14	.15	.14
	MO/M	2.3	1.4	1.7	1.7	*1.7*

TABLE 3 (*continued*). RATIOS OF MONEY TO INCOME (*MO/Y*), IMPORTS TO INCOME (*M/Y*), AND MONEY TO IMPORTS (*MO/M*) FOR 48 COUNTRIES, 1950–54[1]

	Ratio	1950	1951	1952	1953	1954
Mexico	*MO/Y*	.17	.15	.14	.16	.15
	M/Y	.13	.15	.13	.14	.15
	MO/M	1.3	1.0	*1.0*	1.2	1.0
Netherlands[2]	*MO/Y*	.45	.43	.45	.44	.43
	M/Y	.50	.57	.47	.47	.52
	MO/M	*.9*	.8	1.0	1.0	.8
New Zealand[2]	*MO/Y*	.40	.40	.38	.39	.39
	M/Y	.27	.34	.42	.26	.31
	MO/M	1.5	1.2	.9	1.5	*1.3*
Norway[2]	*MO/Y*	.55	.50	.50	.51	.49
	M/Y	.38	.40	.37	.38	.39
	MO/M	1.4	1.3	1.4	*1.4*	1.3
Pakistan	*MO/Y*	.17	.21	.18	.19	...
	M/Y	.08	.10	.12	.06	...
	MO/M	*2.2*	2.1	1.6	2.9	3.4
Paraguay	*MO/Y*	.24	.24	.19	.15	.12
	M/Y	.10	.12	.10	.14	.13
	MO/M	2.3	2.0	*1.9*	1.1	.9
Peru	*MO/Y*	.18	.19	.19	.20	...
	M/Y	.23	.27	.28	.29	...
	MO/M	.8	.7	.7	*.7*	.8
Philippines	*MO/Y*	.19	.16	.16	.15	.15
	M/Y	.12	.16	.14	.15	.15
	MO/M	1.5	1.0	1.1	*1.0*	*1.0*
Portugal	*MO/Y*	.40	.41	.43	.44	.48
	M/Y	.20	.22	.24	.22	.23
	MO/M	2.1	1.9	1.8	*2.0*	2.1
Sweden[2]	*MO/Y*	.37	.36	.34	.34	.33
	M/Y	.27	.33	.29	.26	.27
	MO/M	1.4	1.1	1.2	1.3	*1.2*
Switzerland[2]	*MO/Y*	.63	.61	.60	.61	.60
	M/Y	.25	.30	.26	.24	.25
	MO/M	2.5	2.0	*2.4*	2.5	2.4
Thailand	*MO/Y*	.17	.20	.19	.18	...
	M/Y	.20	.23	.22	...	...
	MO/M	.8	.8	*.9*	.9	.9
Turkey	*MO/Y*	.22	.21	.23	.24	.27
	M/Y	.10	.11	.13	.10	.09
	MO/M	*2.3*	2.0	1.8	2.4	2.9
Union of South Africa[2]	*MO/Y*	.34	.35	.31	.31	.30
	M/Y	.30	.45	.36	.34	.33
	MO/M	1.2	.8	.9	.9	*.9*
United Kingdom[2]	*MO/Y*	.50	.46	.43	.41	.40
	M/Y	.25	.33	.28	.25	.24
	MO/M	2.0	1.4	1.5	*1.6*	1.7

TABLE 3 (*concluded*). RATIOS OF MONEY TO INCOME (*MO/Y*), IMPORTS TO INCOME (*M/Y*), AND MONEY TO IMPORTS (*MO/M*) FOR 48 COUNTRIES, 1950–54[1]

	Ratio	1950	1951	1952	1953	1954
United States[2]	*MO/Y*	.49	.45	.44	.43	.45
	M/Y	.04	.04	.04	.04	.04
	MO/M	12.2	10.4	*11.1*	11.1	12.1
Venezuela[2]	*MO/Y*	.22	.23	.21	...	...
	M/Y	.31	.35	.31	...	...
	MO/M	.7	.6	.7	.7	.6

Sources: International Monetary Fund, *International Financial Statistics* (*IFS*) (Washington), October 1956, and, for some national income figures, United Nations, *Monthly Bulletin of Statistics* (New York), October 1956.

[1] Figures for money pertain to end of year, and those for income and imports to calendar years, except as otherwise indicated in sources. Imports are c.i.f. When the import data on a country page in *IFS* are on f.o.b. basis, c.i.f. figures in national currency have been estimated on the basis of the adjustments in the World Trade Table (*IFS*, pp. 31–32).

For countries for which no national income data are available, the income data have been roughly estimated as follows: about 85 per cent of gross national product (GNP) for Ceylon, Guatemala, and Iceland, and 80 per cent of GNP for the United Kingdom and Sweden.

The figures in italics indicate the median value for *MO/M*. These figures, and the corresponding ratios of *MO/Y* and *M/Y*, have been used in Table 2.

[2] High income country; see text.

[3] Rough extrapolation from 1952 data.

These propositions have been tested on the ratios at hand. In order to eliminate as far as possible abnormal years, especially in the import ratio, one figure has been selected for each country, the median for the five years. It was selected on the basis of the ratio of money to imports; the corresponding two other ratios were then used for the same year. But it is clear for many countries that even if the figures do not change much from year to year, they may still be subject to error, or be untypical for the country in more normal conditions. The figures on money, especially for some of the more developed countries, suffer from the difficulty of definition. The income figures for some of the countries may be very inadequate, thus leading to unexplainable ratios for money to income, and imports to income, but not, of course, for money to imports. The import figures may be unduly low in terms of national currency in those cases where the currency is seriously overvalued and payments are balanced by severe restrictions. For these reasons, no attempt has been made, for purposes of this paper, to explain the ratios for individual countries.[40] Only one division has been made. All countries were

imports to income has more generally been held to *decline* over time, although the evidence on this is by no means clear: cf. United Nations, *World Economic Survey, 1955* (New York, 1956), pp. 51–53.

[40] Neither Chang nor Doblin has been able to give a statistically satisfactory explanation that would fit the data for all countries. Doblin limited his explanation to 13 countries, after eliminating both the Scandinavian and the Anglo-Saxon countries for special reasons. His main correlation was, moreover, based on the ratio of currency to income; with the ratio of currency plus demand deposits to income, the regularity was said to be less good. Chang stratified his countries in three groups, within which the propensity to import is related to real income. The differences between the groups are attributed to different degrees of specialization, but the evidence on this seems inconclusive.

The result of a somewhat more refined correlation calculation made with the

distributed into two nearly equal groups on the basis of their per capita income in dollars in 1952–54. Countries with income of $300 or more per capita are listed in the first group as "high income countries," those with less than $300 per capita as "low income countries."[41] This is roughly a division between developed and less developed countries. That there were interesting differences in the ratios between the two sets of countries is indicated by Table 4 and Chart 3.

The median for the ratio of money to income (MO/Y) for the developed countries is nearly twice that for the low income countries. The difference between the two groups for the money-imports ratio (M/Y), though somewhat smaller, is also pronounced. As a result, there seems to be some difference remaining between the ratios of money to imports (MO/M). But the difference is not pronounced, nor is it large compared with the range within each group. There are, in fact, high and low income countries among those quoted at both ends of the range.

TABLE 4. MEDIANS OF RATIOS, 1950–54, OF MONEY TO INCOME (MO/Y), IMPORTS TO INCOME (M/Y), AND MONEY TO IMPORTS (MO/M), BY GROUPS OF COUNTRIES[1]

	MO/Y	M/Y	MO/M
High income countries (23)	.34	.28	1.3
Low income countries (21)	.19	.17	1.0
All countries (44)	.26	.22	1.2

[1] Based on data in Table 3. For method of grouping countries, see text.

II. Lag of Imports Behind Changes in Exports and Credit Expansion

The formulas in Part II of the main section of this paper and the data in Table 1 are expressed in terms of income periods. For practical purposes, it is desirable to have them expressed in terms of years. This would also be required for any statistical testing of the formulas. Even when quarterly data on exports, income, imports, etc., might be available, it frequently might be best not to use them, in order to avoid seasonal and random fluctuations.

We shall therefore derive a formula linking M to exports and credit expansion, with all variables expressed as annual figures. Since the two autonomous variables affect imports in the same manner, we have to deal with only their sum, which we call $Q(t)$:

$$\Delta DA(t) + X(t) = Q(t)$$

data should be reported here. For 43 countries (all those in Table 3 except Costa Rica, El Salvador, Indonesia, Iran, and Iraq), an attempt was made to explain the average propensity to import (m) on the basis of per capita income (y) and population (p), using logarithms of the three variables. The result was:

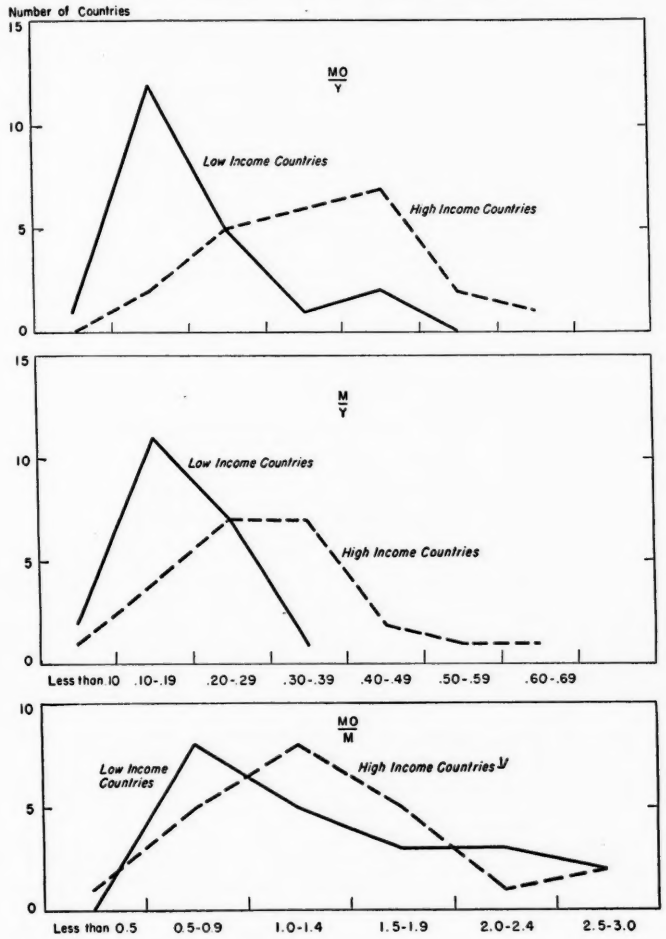
$$m = 1.33y^{.065}p^{-.234} \qquad R = .654$$

Population, and not real income, accounted for almost all of the variance explained; omitting y, the finding was

$$m = 1.55p^{-.245} \qquad r = .640$$

[41] Based on data from Statistical Office of the United Nations, *Per Capita National Product of Fifty-Five Countries, 1952–1954* (New York, 1957).

CHART 3. FREQUENCY DISTRIBUTION OF RATIOS OF MONEY TO INCOME (MO/Y), IMPORTS TO INCOME (M/Y), AND MONEY TO IMPORTS (MO/M) FOR HIGH INCOME AND LOW INCOME COUNTRIES



[1] Ratio for United States omitted.

Table 1 gives the formula for $M(t)$ as a function of past Q's, which may be written in summary form

$$M(t) = m \sum_{i=1}^{i=\infty} (1-m)^{i-1} Q(t-i)$$

in terms of income periods. Writing $r = 1-m$, we find the matrix of coefficients, still in terms of income periods, as given in Table 5.

Let the annual data be indicated by roman numerals:

$$M(-\mathrm{I}) = M(-1) + M(-2) \cdots + M(-x),$$
$$Q(-\mathrm{I}) = Q(-1) + Q(-2) \cdots + Q(-x),$$

where x is the velocity of circulation per year.

If the income period is, say, one quarter, we find from the matrix, mostly by adding terms but in part by use of the assumption that $Q(-1) = \frac{1}{4} Q(-\mathrm{I})$, that

$$M(-\mathrm{I}) = \frac{m}{4}\left[(3+2r+r^2)\,Q(-\mathrm{I}) + \frac{(1-r^4)^2}{(1-r)^2}\,Q(-\mathrm{II}) + r^4\,\frac{(1-r^4)^2}{(1-r)^2}\,Q(-\mathrm{III}) + r^8\,\frac{(1-r^4)^2}{(1-r)^2}\,Q(-\mathrm{IV})\cdots\right]$$

Note that the coefficient for $Q(-\mathrm{II})$ is found as $(1+r+r^2+r^3)$, reading vertically, times $(1+r+r^2+r^3)$, reading horizontally. The coefficient for $Q(-\mathrm{III})$ is r^4 times that of $Q(-\mathrm{II})$ in every place; etc.

More generally, if the income period is $1/x$, the formula for $M(0)$ is

$$M(0) = \frac{m}{x}\left[\{(x-1) + (x-2)r + (x-3)r^2 \cdots (x-x+1)r^{x-2}\}\,Q(0) + \frac{(1-r^x)^2}{(1-r)^2}\,Q(-\mathrm{I}) + \frac{r^x(1-r^x)^2}{(1-r)^2}\,Q(-\mathrm{II})\cdots\right]$$

Since the sum of the coefficients for $Q(0)$, $Q(-\mathrm{I})$, etc., equals 1, we may also consider the coefficients as weights that form part of a distributed lag. Numerical values for these weights are given in Table 6, which covers a fairly wide range of assumptions for m (from 0.10 to 0.35) and x (from 3 to 8).

This table shows that, if m is 0.20 or higher, a very large proportion of the total influence of Q is exhausted in four, and indeed in three, years. However, even for rather high values of x and m (e.g., $x = 6$, $m = 0.30$; $x = 7$, $m = 0.25$), only about half of the import effect of an increase in Q falls in the same year. The weighted

TABLE 5. MATRIX OF COEFFICIENTS FOR Q IN THE DETERMINATION OF M, IN TERMS OF INCOME PERIODS

		$mQ(t)$										
	t	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	
$M(t)$	-1	—	1	r	r^2	r^3	r^4	r^5	r^6	r^7	r^8	...
	-2	—	—	1	r	r^2	r^3	r^4	r^5	r^6	r^7	...
	-3	—	—	—	1	r	r^2	r^3	r^4	r^5	r^6	...
	-4	—	—	—	—	1	r	r^2	r^3	r^4	r^5	...
	-5						1	r	r^2	r^3	r^4	...
	-6							1	r	r^2	r^3	...
	-7								1	r	r^2	...

TABLE 6. COEFFICIENTS FOR $Q(0)$, $Q(-\text{I})$, $Q(-\text{II})$, AND $Q(-\text{III})$ IN THE DETERMINATION OF $M(0)$[1]

		$Q(0)$	$Q(-\text{I})$	$Q(-\text{II})$	$Q(-\text{III})$	Sum of These Coefficients
	$m = 0.10$	0.10	0.24	0.18	0.13	0.65
	0.15	0.14	0.33	0.20	0.12	0.80
	0.20	0.19	0.40	0.20	0.10	0.89
$x=3$	0.25	0.23	0.45	0.19	0.08	0.94
	0.30	0.27	0.48	0.16	0.06	0.97
	0.35	0.31	0.50	0.14	0.04	0.99
	$m = 0.10$	0.14	0.30	0.19	0.13	0.76
	0.15	0.20	0.38	0.20	0.10	0.89
	0.20	0.26	0.44	0.18	0.07	0.95
$x=4$	0.25	0.32	0.47	0.15	0.05	0.98
	0.30	0.37	0.48	0.11	0.03	0.99
	0.35	0.41	0.48	0.09	0.02	1.00
	$m = 0.10$	0.18	0.33	0.20	0.12	0.83
	0.15	0.26	0.41	0.18	0.08	0.94
	0.20	0.33	0.45	0.15	0.05	0.98
$x=5$	0.25	0.39	0.47	0.11	0.03	0.99
	0.30	0.45	0.46	0.08	0.01	1.00
	0.35	0.49	0.45	0.05	0.01	1.00
	$m = 0.10$	0.22	0.37	0.19	0.10	0.88
	0.15	0.31	0.43	0.16	0.06	0.96
	0.20	0.39	0.45	0.12	0.03	0.99
$x=6$	0.25	0.45	0.45	0.08	0.01	1.00
	0.30	0.51	0.43	0.05	0.01	1.00
	0.35	0.56	0.41	0.03	0.00	1.00
	$m = 0.10$	0.25	0.39	0.19	0.09	0.92
	0.15	0.35	0.44	0.14	0.05	0.98
	0.20	0.44	0.45	0.09	0.02	0.99
$x=7$	0.25	0.50	0.43	0.06	0.01	1.00
	0.30	0.56	0.40	0.03	0.00	1.00
	0.35	0.61	0.37	0.02	0.00	1.00
	$m = 0.10$	0.29	0.41	0.17	0.08	0.94
	0.15	0.39	0.44	0.12	0.03	0.99
	0.20	0.48	0.43	0.07	0.01	1.00
$x=8$	0.25	0.55	0.40	0.04	0.00	1.00
	0.30	0.61	0.37	0.02	0.00	1.00
	0.35	0.65	0.33	0.01	0.00	1.00

[1] See discussion in text.

average lag of imports behind the initial expansionary factor that can be computed from these data runs from about one third for the very highest values of x and m to well over a year for low values.[42]

Table 5 may pose difficulties in empirical work, especially if it covers only relatively short periods. In the form in which it is presented it requires data on Q

[42] The weighted average lag is found to be as follows:

$$k_1 + 2k_2 + 3k_3 \cdots\cdots$$

where k_1 is the coefficient of $Q(-\text{I})$, k_2 that of $Q(-\text{II})$, etc.

for three or four years back to explain the current M. Thus any empirical explanation of M could go back only three or four years less than the period for which data on Q are available. However, if it is assumed that last year's M reflects reasonably well the Q's of the years before last year, the formula can be simplified so as to eliminate long lags.

If the coefficient for $Q(0)$ is indicated by k_0 and that for $Q(-\mathrm{I})$ by k_1, etc., the formula for $M(0)$ can be compared with that for $M(-\mathrm{I})$ as follows:

$$M(0) = k_0Q(0) + k_1Q(-\mathrm{I}) + k_1r^xQ(-\mathrm{II}) + k_1r^{2x}Q(-\mathrm{III})\cdots$$

$$M(-\mathrm{I}) = k_0Q(-\mathrm{I}) + k_1Q(-\mathrm{II}) + k_1r^xQ(-\mathrm{III})\cdots$$

Hence: $M(0) = k_0Q(0) + [k_1 - k_0r^x]\,Q(-\mathrm{I}) + M(-\mathrm{I})r^x$

which eliminates the need for all data more than one year back.

Banking in the Middle East

Anwar Ali*

MODERN BANKING in the Middle East dates from the second half of the last century. The Ottoman Bank in Turkey, established in 1863, is, perhaps, the oldest modern banking institution in the area. Banking has made slow but steady progress ever since, the progress depending upon the pace of economic development in various countries and of the transition from predominantly barter to semi-market economies. More recently, with the emphasis placed on economic development in a number of countries, there have been definite efforts to extend banking services and diversify banking institutions. However, the improvement has by no means been uniform. In some countries, for example, a nomadic way of life still survives, and there is no regularly organized banking system or paper currency. Thus, while progress in recent years has been steady, the banking structure of the Middle East still reflects, on the whole, the economic backwardness of the area and the limitations of domestic banking.

Various causes have retarded progress in the development of banking. The basic cause has been the primitive, underdeveloped, and, until comparatively recently, the almost self-contained nature of the economy in many countries of the region. Nearly 80 per cent of the people live upon agriculture and practice primitive methods of cultivation that yield extremely low crops.[1] Much of the agricultural produce does not enter the market but is consumed by the producers or bartered for services and other necessities. The monetization of the economy is thus, in varying degrees, incomplete.[2] The majority of the countries export primary commodities and are dependent upon imports for most of the finished consumer goods that they need. Industrial development is in its early stages. Average per capita income is low and the margin for savings limited.

* Mr. Anwar Ali, Director of the Middle Eastern Department, is a graduate of the University of the Punjab. He was formerly Joint Secretary in the Ministry of Finance of Pakistan and Director of the Pakistan State Bank and the National Bank.

[1] As an exception, Egypt's crop yields are among the highest in the world, but the pressure of population on land is considerable.

[2] The ratio of money supply to national income serves as some guide to the extent of monetization achieved in the economies of different countries. The relevant data for 1954, summarized in Table 1, show that the ratio varies from 7 per cent in Ethiopia to 51 per cent in Lebanon.

TABLE 1. COMPARISON OF MONEY SUPPLY AND NATIONAL INCOME OF MIDDLE EASTERN COUNTRIES, 1954

	Currency	Money Supply, End of Year (*millions*)	National Income Estimates (*millions*)	$\frac{\text{Money Supply}}{\text{National Income}} \times 100$
Egypt	LE	359	855	42
Ethiopia[1]	Eth$	154	2,200	7
Iran[2]	Rls	12,280	122,800	10
Iraq[2]	ID	47	152	31
Lebanon	LL	608	1,192	51
Pakistan	PRs	3,859	18,156[3]	21
Syria	LS	435	1,611	27
Turkey	LT	3,869	14,326	27

Sources: The money supply data are from International Monetary Fund, *International Financial Statistics;* Syrian Council on Money and Credit; and State Bank of Ethiopia. The national income data for Egypt are from Ministry of Finance, *Budget Report for 1956–57* (Cairo); for Ethiopia, from State Bank of Ethiopia; for Iran and Iraq, from United Nations, Statistical Office, Department of Economic and Social Affairs, *National and Per Capita Incomes of Seventy Countries in 1949 Expressed in United States Dollars* (New York, October 1950); for Lebanon and Turkey, from United Nations, Statistical Office, Department of Economic and Social Affairs, *Statistics of National Income and Expenditure* (New York, May 1956); for Pakistan, from State Bank of Pakistan; for Syria, from Bureau des Documentations Syriennes et Arabes (Damascus).

[1] 1952.
[2] 1949.
[3] Year ended March 31, 1954.

Mass illiteracy, varying degrees of instability, and the religious attitude toward usury are other factors that have affected the growth of banking. The attitude toward interest is undergoing a change (a distinction is now usually drawn between usury and bank interest), but the rural peasantry is still prejudiced. In the past, the habit of putting savings into hoards of precious metals, or even of currency, has been deeply ingrained. Although there is some evidence that the relative importance of savings in this form has declined in recent years, there is still a strong preference on the part of those who can save and of the small wealthy class to invest their savings in land, real estate, or merchandise. This tendency is attributable largely to the expectation—prevalent for centuries in lands of insecurity and uncertainty—of quick and large profits on capital risks. The tendency to invest in land or real estate is widespread. In Syria, for example, it has been estimated that in the four-year period, 1950–53, nearly 56 per cent of gross private investment was in housing construction. In Turkey, 44 per cent of the total private investment in 1955 was related to construction; and in Egypt, the value of new private buildings (excluding the value of land) accounted for about 50 per cent of gross capital formation during 1954.[3] Thus, while it is true that the over-all volume of savings is

[3] The investment data for Syria are from the International Bank for Reconstruction and Development, *The Economic Development of Syria* (Baltimore, 1955); for Turkey, from the United Nations, Department of Economic and Social Affairs, *Economic Developments in the Middle East, 1945 to 1954:* Supplement to *World Economic Report, 1953–54* (New York, 1955); for Egypt, from the National Bank of Egypt, *Economic Bulletin,* Vol. IX, No. 1 (Cairo, 1956).

limited, the important point is that quite a large proportion of whatever savings accrue is not institutionalized and channeled into uses that add significantly to productive capacity.

Another institutional factor responsible for the slow growth of banking has been the absence of any organized system of indigenous banking practices.[4] In these circumstances, all the pioneering work in the introduction and development of modern banking was performed by foreign banks, mostly British and French. Foreign banks showed their first interest in the area mainly in the wake of colonial penetration by their countries, but they continue to occupy an important and useful position. Without minimizing the extremely valuable contribution they have made, it might be stated that, since the main objective of their activities has been related to the commercial sector, their operations have been concentrated in a few business centers, have been generally conservative, and have been confined mainly to the financing of foreign trade. As a result, there has been little conscious effort to attract deposits, to spread banking activities in the interior of a country, or to diversify banking operations. Agricultural finance has, in general, been neglected. On the whole, these shortcomings should be interpreted as reflecting the deficiencies of domestic banking rather than as a criticism of foreign banks. At the same time, it seems necessary for foreign banks to readjust their policies to the needs of a changing situation.

With the hard core of a sound banking structure laid by foreign banks, banking in the Middle East has, more recently, received a powerful stimulus from the political and economic changes taking place in that area since World War II. With the achievement of independence by a number of countries, increasing attention is being devoted to economic development. Several countries have embarked upon programs of basic development (e.g., Turkey, Pakistan, Iran, Egypt, Iraq, and Syria). Assisted by fiscal and other incentives provided by national governments, private enterprise has begun to show a marked response toward productive investment. These changes necessarily call for a new approach toward savings and the extension and diversification of banking institutions.

[4] Although the exact origin of banking is hidden in antiquity, the earliest evidence traces it to the Middle East. The practices of safekeeping and savings banking flourished in the temples of Babylon as early as 2000 B.C. Furthermore, clay tablets discovered in the ruins of Babylonia indicate that credit instruments used in the ninth century B.C., in the form of promises and orders to pay gold and silver coins, were the forerunners of the promissory notes and bank checks used today. (E. W. Boehmler, R. I. Robinson, F. H. Gane, and L. C. Farwell, *Financial Institutions*, Homewood, Illinois, revised edition, 1956.) These practices did not, however, develop in the Middle East through the ages, and the only living remnants today of the ancient art of banking are perhaps the sarrafs in Iraq, whose activities now are of only secondary importance.

Commercial banking has undergone a rapid expansion in many countries in recent years. A number of new private commercial banks (mostly local) have been established; moreover, some governments have taken the initiative in establishing commercial banks and have subscribed at least part, if not all, of the capital. Available information suggests that in a number of countries a considerable volume of business is now being handled by local banks.

In view of the almost complete absence of organized capital markets in the Middle Eastern countries, most governments have set up specialized financial institutions to provide medium-term and long-term capital for agriculture and industry, as well as short-term financing to agriculture. Except in one or two countries, the activities of these institutions have been limited so far; but with experience the institutions may be expected to play a more active and vital role in the future.

Recent banking trends in eight of the Middle Eastern countries, particularly during the postwar period, are discussed in the present paper. The eight countries are Egypt, Ethiopia, Iran, Iraq, Lebanon, Pakistan, Syria, and Turkey, which embrace about three fourths of the area's total population. In the main, it is proposed to deal with (1) commercial banking, (2) the special financial institutions that have been set up to provide agricultural and industrial credit, and (3) central banking, including a general appraisal of the monetary situation.

I. Commercial Banking

General pattern

The banking structures of the Middle Eastern countries differ widely. In both Iran[5] and Ethiopia, the state-owned central banks (the Bank Melli Iran, established in 1927, and the State Bank of Ethiopia, established in 1942) perform commercial banking functions in addition to their government functions.[6] In Iran there are 5 private commercial banks, of which 1 is a foreign bank, but these account for only about one tenth of total bank business. Ethiopia has branches of 2 Italian banks whose activities are of minor importance. Apparently, the paucity of local private commercial banks in both countries has been the main reason for the combination of central and commercial bank-

[5] Banking in the modern sense was introduced in Iran in 1889 with the establishment of 3 foreign banks, 2 of which were British and 1 Russian. The British banks have since ceased operations. The Iranian banking law discriminates against foreign banks.

[6] The Bank Melli Iran operates 158 branches and agencies. The State Bank of Ethiopia has 15 branches.

ing functions in the 2 state-owned institutions. Private commercial banking has, however, shown signs of growth in Iran in the last few years.

In the other countries of the area, commercial banking is mainly in private hands, and branch banking is the invariable rule. Among the countries where private banks predominate, the business of these banks has increased significantly in Lebanon and Turkey (Table 2). The principal commercial banks in Turkey include 10 Turkish banks and 5 foreign banks. The Iş Bank (partly state-owned) is the largest. Of the foreign banks, the largest and oldest is the French and British controlled Ottoman Bank, which also operates in Egypt, Iraq, and Jordan. Mention should also be made of the state-owned Sumer Bank, which participates in industry, and the Eti Bank, which operates state mining enterprises. These banks, although performing some commercial banking functions, are really in the nature of holding companies and are a by-product of the state capitalism introduced in Turkey in 1934.

Egypt has 26 commercial banks, of which 11 are foreign.[7] The largest is the domestically owned Bank Misr, which was founded in 1920. In addition to its normal commercial banking operations, this bank has been active in the promotion of industrial enterprises. As a result of an overextension of its industrial participation, it met with a temporary crisis in 1939. The central bank of Egypt is the National Bank of Egypt,[8] a private bank, which has limited its commercial banking activities since 1951, when it was legally vested with central banking functions.

Pakistan has 32 "scheduled" banks[9] with 251 branches, which are mainly centered in the larger towns. Only 5 of these banks are incorporated in Pakistan, but their branches number 152. There are also 50 "nonscheduled" banks, whose activities, however, are of minor importance. The Government sponsored a commercial bank in 1949, the National Bank of Pakistan, and holds 25 per cent of its share capital.

[7] The Egyptian Government decreed in January 1957 that the British and French banks operating in Egypt should be sequestered and that all banks operating in Egypt should take the form of Egyptian limited liability companies.

[8] The National Bank of Egypt was established in 1898 as an Egyptian company with half of its capital of £1 million subscribed in London. It was empowered to issue banknotes, make advances to the Government, discount bills, and receive deposits. Egyptian Law No. 571 of 1951 changed the *de jacto* position of the National Bank as a central bank into a *de jure* position. The Bank remained a private company and, while not being called upon to withdraw from commercial banking, was asked not to open small accounts. The Governor of the Bank is appointed by the Minister of Finance from among two nominees of the Bank's Board of Directors.

[9] A "scheduled" bank is a joint stock bank having a paid-up capital and resources of PRs 500,000 (US$105,042) or more and included in the "second schedule" to the State Bank of Pakistan Order, 1948. Banks with smaller capital and resources are called "nonscheduled" banks.

TABLE 2. DATA ON COMMERCIAL BANKING, MIDDLE EASTERN COUNTRIES, 1948–54

(In millions of U.S. dollars for deposits, advances, etc.)[1]

	Population	Private Time Deposits		Total Private Deposits			Deposits Per Capita	Commercial Bank Claims on Private Sector			Central Bank Advances to Commercial Banks	Cash and Reserves
	1953 (*millions*)	1948	1954	1948	1954	Percentage change, 1948–54	1954	1948	1954	Percentage increase, 1948–54	1954	1954
Egypt	22.6	52	135	677	623	−8	28	244	445	82	34	109
Ethiopia[2]	15.0[3]	—	2	12	17	42	1	4	5[4]	25	—	13
Iran	20.3	6	12	88	168	91	8	58	107	84	—	21
Iraq	4.8	20	28	56	81	45	17	17[5]	70	312	—	31
Lebanon	1.4	1	8	61[6]	120[6]	100	86	69[7]	124[7]	79	...	...
Pakistan	77.4	35	101	245	370	51	5	86	207	142	39	36
Syria[8]	3.6	13	16	32	45	41	12	45	123	173	5	7
Turkey	22.5	53[9]	147[9]	339	1,052	210	46	297	1,333	349	384	146
Total, all countries	167.6	180	449	1,510	2,476	64	15	820	2,414	194		
Total, excluding Turkey		127	302	1,171	1,424	22		523	1,081	107		

Sources: International Monetary Fund, *International Financial Statistics;* data from Syrian Council on Money and Credit and from State Bank of Ethiopia.

[1] To convert data in national currencies into U.S. dollars, the current par value has been used, except for Syria, Lebanon, and Iran, for which the current rate applying to most or all transactions has been used. In the preparation of this table, it was thought preferable to use a uniform rate for conversion of data for different periods mainly because this procedure makes the percentage changes in terms of local currency equivalent to those in terms of dollars.

[2] Data for State Bank only.

[3] Approximate figure.

[4] 1953.

[5] 1950.

[6] Includes government deposits with the Bank of Syria and Lebanon.

[7] May include advances to public institutions and government.

[8] Data for 1952 and 1954.

[9] May include small amounts of time deposits with the Central Bank.

This bank has made rapid progress and is now the largest commercial bank in the country.

There are 7 commercial banks in Iraq, of which 5 are foreign. The largest is the government-owned Rafidain Bank, established in 1941, which, until recently, also acted as banker to the Government. The availability of substantial government deposits for its commercial operations has enabled the Rafidain Bank to consolidate and strengthen its position in recent years. With effect from September 1, 1956, all fiscal agency functions have been transferred to the Central Bank of Iraq.[10]

In Lebanon, a country of 1.4 million people, there are 35 banking institutions, of which 16 are foreign banks.[11] In addition, there are a number of small institutions, which are either discount houses or engage in money lending at high rates of interest. Syria had 19 banks in 1955, and all of the 10 larger ones were foreign. One of the foreign commercial banks, the Bank of Syria and Lebanon, acts in both Syria and Lebanon as banker to the Government, and holds substantial public funds which have been important for its commercial operations. With effect from September 1, 1956, however, Syria has established an independent central bank (see Part III, below).

The record of banking in the Middle East has been relatively free of bank failures. The predominance of strong foreign banks, and the conservative but sound traditions they have established, have been the main contributing factors. Another factor, however, has been the general prevalence of branch banking in the area. The presence of a few large banks with a number of branches has imparted general strength to the banking system in most countries. But one drawback to the system has been that credit, instead of flowing from the large towns to outlying places, has generally tended to be concentrated in the large towns at the expense of the smaller centers and rural areas.

Even in the countries where private banking predominates, the shortcomings of domestic banking are now being remedied through state initiative. But for the prestige and support lent to the newly established local institutions by official participation, they might not ordinarily have been in a position to extend their activities successfully within relatively short periods. In their day-to-day operations, these banks

[10] Prior to September 1, 1956, it was called the National Bank of Iraq. The accounts of the Development Board, whose cash balances have recently been substantially larger than those of the Government, have always been maintained with this Bank.

[11] The banking profession in Lebanon is entirely free and unregulated. Anybody, Lebanese or foreign, can at any time open and operate a bank without any requirements in regard to the legal form of business or minimum capital. Banking transactions are considered as acts of commerce, and persons and corporations carrying them out as merchants.

are understood to function on purely commercial lines and free from government interference or directions. As an objective of policy, they are making banking services available to larger sections of the population by opening a network of branches in the countries concerned.

Recent growth in bank deposits and credit

Since the end of World War II, banking resources in the Middle East have been rapidly expanded as both deposits and advances have increased (Table 2). Although the growing use of banking facilities by the business community has been an important factor in this expansion, the recorded figures for some countries should also be interpreted as, in fact, a reflection of the inflationary pressures that have been at work.

In Turkey, bank deposits and advances increased steadily between 1948 and 1950, but thereafter they expanded much more rapidly when the monetary situation assumed an inflationary trend. Over the period 1948–54, commercial bank deposits increased more than 200 per cent (from $339 million to $1,052 million) and credit to the private sector by about 350 per cent (from $297 million to $1,333 million). In the other seven countries, bank deposits increased during the same period by 22 per cent (from $1,171 million to $1,424 million); on the other hand, credit to the private sector rose by 107 per cent (from $523 million to $1,081 million). As a result, the liquidity of the banking system declined sharply. The increase in credit in these seven countries was mainly in order to support higher levels of economic activity. The disparity between the rates of growth of deposits and of credit is of considerable importance for the future.

In most countries—particularly Pakistan and Egypt—time deposits rose faster than demand deposits. In Pakistan, time deposits increased from 16 per cent of total deposits in 1948 to 29 per cent at the end of 1954, and in Egypt from 8 per cent to 22 per cent. In Egypt, there was a considerable shift from demand to time deposits, since total deposits fell slightly during the period. Time deposits continued to be low in Turkey, Iran, Lebanon, and Ethiopia. Despite the substantial increase in time deposits for the area as a whole, they were only 19 per cent of total deposits at the end of 1954.

A major factor in the increase in bank deposits was the expansion in the economies of many countries. Even more important in certain countries were the large government outlays accompanied by central bank financing of these expenditures. The substantial increase in bank deposits in Turkey must be largely attributed to this factor. The same also applies to Pakistan and Iran, although in a smaller degree. In Lebanon, the increase in deposits presumably included a considerable inflow of capital from the oil-producing countries of the area. In Egypt,

the decline in bank deposits reflected the contractionary effect on the money supply of large balance of payments deficits during the period under review. More recently, under the impact of fiscal deficits, bank deposits in Egypt have begun to increase.

Relative importance of currency and demand deposits

In assessing the relative importance of currency and deposits in the Middle East, the figures relating to the ratio of demand deposits to money supply, given in Table 3, are pertinent. These figures underline

Table 3. Ratio of Demand Deposits to Money Supply, Middle Eastern Countries, 1948 and 1954[1]

(*In per cent*)

	1948	1954		1948	1954
Egypt	62	47	Lebanon[2]	51	60
Ethiopia	32	24	Pakistan	37	33
Iran	49	50	Syria	22[3]	24
Iraq	26	30	Turkey	47	65

[1] Based on data in Tables 2 and 9. In 1954, ratio of demand deposits to money supply was 31 per cent for India, 71 per cent for the United Kingdom, and 80 per cent for the United States.
[2] Money supply and demand deposits include government deposits with the Bank of Syria and Lebanon.
[3] 1952 data.

the fact that, with the exception of Turkey and Lebanon (the Lebanese figures are somewhat influenced by the inclusion of government deposits), there continues to be a strong preference in the Middle East for currency instead of bank deposits. The slow growth of the banking habit is evident. In Egypt and Pakistan, the decline between 1948 and 1954 in the ratio of demand deposits to the money supply is affected somewhat by the larger growth of time deposits, which have been excluded from Table 3. In Turkey, on the other hand, while there has undoubtedly been a change in banking habits, the apparent improvement in the seven-year period should be regarded with some reserve, as the increase in demand deposits is presumably related to the large increase in bank credit in that country.

Heavy concentration on short-term credit

The activities of commercial banks throughout the Middle East are concentrated heavily on short-term credit, and the banks carry only small investment portfolios. Indeed, in most countries, the demand for short-term loans and advances is so high relative to available deposits that there is little room for more diversified investments. In December 1954, the ratio of advances and bills discounted to deposits was 56

per cent in Pakistan, 64 per cent in Iran, 71 per cent in Egypt, and 86 per cent in Iraq. The situation in this respect is somewhat unbalanced in Syria, Lebanon, and Turkey, where advances considerably exceed private bank deposits; the ratio for Syria was 273 per cent, for Lebanon 103 per cent, and for Turkey 127 per cent.[12]

Lebanon is in a special position in this respect for it finances a not inconsiderable portion of the transit trade for neighboring countries. Its additional needs for short-term credit are met by drawings of the foreign banks on their head offices abroad and by the use of government deposits for the commercial operations of the Bank of Syria and Lebanon. In Syria, the gap between the low level of bank deposits and the substantially larger credit needs of the private sector has been filled in the past in much the same manner as in Lebanon, but the need for measures to raise the level of deposits is apparently more urgent in Syria than in Lebanon. During 1954 and 1955, there was also a large and perhaps excessive expansion of credit to the private sector in Syria, and the monetary authority, the Council on Money and Credit, intervened to arrest this trend. In Turkey, the substantial increase in commercial bank credit is part of the prevailing inflationary situation, supported by central bank accommodation.

Commercial bank credit in the Middle East is related mainly to the financing of foreign trade. Apart from accommodation made available to shippers, banks extend credit primarily to merchants on the pledge of stocks, and they insist on the usual margins. Most of the advances —nearly 90 per cent—are secured. The provision of working capital to industrial establishments, although still limited, is growing in importance. While complete and accurate data for an analysis of bank advances are lacking, the data in Table 4 are illustrative of the general picture.

The activities of commercial banks play an insignificant role in most Middle Eastern countries in the financing of agricultural operations or of the marketing of agricultural produce. This is one of the serious drawbacks from which bank operations suffer in that area. Furthermore, there is no organized link between the banking systems and the indigenous money markets, mostly moneylenders. Agriculturists seek loans mainly for consumption purposes and pay exorbitant rates of interest to moneylenders. In view of the undeveloped state of indigenous money markets and the social feeling against moneylenders, little attempt has been made to establish a link between them and the banking systems and thus to enlarge the credit base. In the circum-

[12] The quoted ratios are liable to some error since in some countries figures for bank investments are not available separately. However, these investments are known to be small.

TABLE 4. DISTRIBUTION OF COMMERCIAL BANK LOANS AND ADVANCES FOR SELECTED COUNTRIES IN THE MIDDLE EAST, DECEMBER 1954[1]

(In per cent)

	Commerce	Industry	Agriculture	Real Estate	Miscellaneous	Total
Pakistan (Dec. 1955)	65	23	2	3	7	100
Syria	70	13	8	...	9	100
Turkey	59	3[2]	31[3]	7	—	100

[1] Based on data from State Bank of Pakistan, *Bulletin:* Ministry of Finance of Turkey; and Syrian Council on Money and Credit.
[2] Does not take into account advances by the Sumer and Eti Banks to government-controlled industrial and mining establishments. These two banks are actually holding companies.
[3] Includes the operations of the Agricultural Bank, which is classified as a commercial bank because of certain normal commercial banking operations that it undertakes.

stances and appropriately enough, the main reliance in the field of agricultural credit is being placed on special financial institutions and the promotion of cooperatives, to the extent feasible.

BILL MARKETS

The small volume of bills held by banks in most Middle Eastern countries indicates that bills do not play any important role in the short-term money markets. Lebanon, with its strong emphasis on foreign trade, constitutes a notable exception; bank credit in that country is generally related to the discounting of bills. In most of the countries, however, there is a need to develop a bill market, and central banks could usefully address themselves to this task.[13] In particular, by showing a greater readiness to rediscount agricultural bills (possibly at rates more favorable than the normal rediscount rates), central banks could induce commercial banks to provide reasonable facilities for agricultural marketing operations. Such a development would not only enlarge the functions of the commercial banks in a desirable and neglected field; it also would enable the specialized agricultural credit institutions to concentrate their activities more on the extension of medium-term and long-term credit for agricultural development.

[13] Pakistan has under consideration an interesting proposal regarding the establishment of discount houses for expanding the money market. In essence, the scheme visualizes the establishment of discount houses by local firms and moneyed individuals. Commercial banks are to participate in the capital subscription and provide rediscounting facilities at concession rates. The State Bank will, in turn, provide rediscounting facilities to commercial banks. It is stipulated that discount houses should discount bills of trade but not be allowed to accept deposits. The Planning Board has recommended the scheme to the State Bank of Pakistan for further study.

Investments in government securities

Middle Eastern commercial banks do not hold any substantial portfolios of government securities. An exception is Pakistan, where, at the end of 1954, commercial bank holdings of government securities constituted nearly 45 per cent of bank deposits. Most Middle Eastern countries have not, so far, embarked upon any large-scale public debt flotations, and, in any event, the scope of such operations would undoubtedly be severely limited by the existing volume of bank advances relative to deposits. This situation suggests that public debt operations, if undertaken, may require considerable support from the central banks.

Interest rate structure

The foregoing survey brings into sharp relief the question of interest rates in the Middle East, from the standpoint both of the stimulus they give to saving and of the cost of credit. Interest rates are generally low within the banking system and high outside of it. The general pattern of interest rates on bank deposits and advances is indicated by the data in Table 5.

The lowest rates prevail in Pakistan and Egypt. The larger banks in the countries of this area, with the exception of Turkey, Syria, and Lebanon, usually pay no interest on sight deposits. In Egypt, the interest rates on notice deposits were reduced in January 1955 by members

Table 5. Interest Rates on Commercial Bank Deposits and Advances, Yields on Government Bonds, and Central Bank Discount Rates, Middle Eastern Countries, December 1955

(*In per cent*)

	Sight Deposits	Time Deposits, One Year	Short-Term Advances, Secured	Government Bond Yield	Central Bank Discount Rate
Egypt[1]	—	2½	4 to 6	2.83	3
Ethiopia	—	3½	7	—	—
Iran	—	4½	6[2]	—	4
Iraq	—	2 to 3	4½ to 6	...	2½
Lebanon	1 to 2½	3 to 3½	6[3] + commission	3	—
			3[3] to 5		
Pakistan[4]	—	2	3½ to 5	3.15	3
Syria	4	...	6	—	3½[5]
Turkey	2½	4	7 + commission[6]	4.77[7]	4½[8]

[1] Interest on notice deposits, 1 per cent.
[2] Bank Melli Iran rate on 31-day bills. For 45-day bills, 7 per cent; and for 90-day bills, 8 per cent.
[3] Legal maximum rate. Latest market discount rate, 5.23 per cent, February 1956.
[4] 1½ per cent on six-month deposits.
[5] For industrial and agricultural purposes, 3½ per cent.
[6] Legal maximum rate.
[7] October 1955.
[8] Raised to 6 per cent in June 1956.

of the Egyptian Bankers Association from 2–2½ per cent to 1 per cent, and on time deposits from 3¾–4 per cent to 2½ per cent. In view of the almost stationary level of bank deposits in Egypt and the growing needs of the private sector, the propriety of making a substantial reduction in interest rates appears doubtful. It would not be unlikely for interest rates in Egypt to harden in the future, in view of the large development program envisaged and the support which the banking system may be expected to provide to the Government's borrowing program.[14] In Syria and Iraq, interest rates showed a tendency to rise during 1954 and 1955, and it is believed that the banks were thereby able to attract more deposits.

In general, interest rates are lower in countries where deposits are adequate to meet the short-term requirements of trade and business (e.g., Pakistan, Egypt, and Iraq) and higher in countries where the demands of the private sector exceed deposits (e.g., Syria, Turkey, and Lebanon). In the latter group of countries, the prevailing rates are hardly equilibrium rates, for in both Syria and Lebanon the use of government deposits to meet the credit needs of the private sector considerably eases the shortage of funds; in Turkey, maximum rates are fixed by law. In Iraq, too, normal interest rates might have been higher if government deposits had not been available to the Rafidain Bank for its commercial advances.

At first sight it is not a little surprising that interest rates should be low in an area where the level of savings is inadequate. The explanation is found in the narrowness of the sphere within which commercial banks operate in most countries and the conservative safety margins that are normally required. As the demands for financing exports and imports can be satisfied from available deposits, there has been little need to attract larger deposits by offering higher rates. In the past, the ability of the foreign banks to draw on their head offices abroad to meet seasonal needs has also been a contributing factor; but this is of diminishing importance now, except possibly in Syria and Lebanon. Finally, the governments and central banks in some countries have encouraged a policy of low interest rates by commercial banks.

It is possible to maintain that a higher level of interest rates could attract into the banking system some savings which presently go into landed property, real estate, or hoards. This would also have a healthy effect on capital formation. To be effective, however, such a policy might call for an increase in interest rates so substantial that it would probably be resisted on political, social, and fiscal grounds. In the circumstances, most governments are likely to rely on tax incentives for

[14] Since this paper was written, interest rates on bank deposits have shown a tendency to rise in Egypt. It is too early to indicate relevant data as interest rates may take some time to stabilize at any particular level.

promoting particularly desired industrial and other investments; but such policies, while desirable in themselves, are likely to be limited in effect.

The over-all level of deposits and advances, coupled with the rate of their growth, suggests the desirability of a suitable increase in interest rates, accompanied by an extension of banking services, if progress is to be maintained without adverse effects on monetary stability. If the rapidly growing needs of the public sector are also taken into account, such action appears to be clearly indicated. In particular, governments would be well advised to pursue a policy of extended savings banking through their post office systems.[15] It needs to be emphasized that, despite improvement in recent years, savings in most Middle Eastern countries are far too low. On the other hand, because of the general dependence on irrigation for supporting the agricultural economy, capital requirements are larger than in most of the less developed countries. The need for higher savings is thus obvious. In this connection, it also should be emphasized that the maintenance of a reasonable degree of monetary stability constitutes an essential prerequisite to the achievement of a higher level of savings. Inflation is likely not only to divert available savings into real estate, merchandise, or hoards, but also to distort the whole pattern of development, thus defeating the very objectives that development is intended to serve.

The recent trend in some countries toward time deposits suggests the possibility that commercial banks may be in a position to satisfy part of the medium-term requirements of the capital market. In view, however, of the presence of government-controlled specialized institutions in this field and of the fact that, in the interest of a rapid promotion of industry and agriculture, interest rates are being subsidized, the direct activities of commercial banks in this field appear likely to remain limited.

II. Special Financial Institutions

Because of the absence of capital markets in the Middle East and the limited ability of commercial banks to provide support to agriculture and industry, the governments of nearly all these countries have sponsored special financial institutions for these purposes. Many of

[15] Of the eight countries under discussion, only three (Egypt, Iraq, and Pakistan) have postal savings banks. The rates of interest on deposits are as low as 2 per cent in Egypt and Pakistan and 3 per cent in Iraq. Outstanding deposits at the end of 1954 were LE 26.4 million in Egypt (against LE 29.5 million in 1948), PRs 329 million in Pakistan, and ID 2.3 million in Iraq. Only Pakistan issues post office savings certificates.

these institutions are a product of the postwar period and draw their resources from sources other than ordinary bank deposits. Their activities may be judged from the figures given in Table 6.

Agricultural credit

In the field of agricultural credit, notable advances have been made in Turkey and Egypt. In Turkey, the first agricultural credit institutions were small local cooperative banks which merged in 1888 to form the Agricultural Bank of Turkey. This is perhaps the oldest local credit institution in the area. With its present 418 branches and agencies, the Bank has made an effective contribution to the development of agriculture. Its activities have undergone a marked expansion since World War II, when Turkey undertook an active program of agricultural expansion, accompanied by land reforms. The credits extended by the Bank and the cooperatives which it supports rose from LT 31 million in 1937 to LT 641 million in 1951 and LT 1,961 million in 1954. A considerable portion of this credit is in the form of crop loans. In addition to the Agricultural Bank, the Agricultural Equipment Establishment, whose capital is provided by the Government, supplies to cultivators equipment on credit. Between 1950 and 1953, it financed the purchase of tractors (11,011), harvesters (2,261), fertilizers, etc., with a total value exceeding LT 200 million.[16]

In Egypt, the Agricultural Credit and Cooperative Bank in 1931 took the place of the Agricultural Bank of Egypt (established in 1902), which ceased operations in 1930 as a result partly of the difficulties arising from the Five Feddan Law of 1913, which forbade foreclosures in respect of ownership of land of five feddans or less and thus made it impossible to grant credit on the security of such small holdings. The new bank was exempted from these limitations. For its working capital, it depends upon a special appropriation of LE 9 million made available to it by the Government at a special rate of 1 per cent, and upon loans from the National Bank of Egypt. Its loans and advances have been increasing steadily in recent years; they amounted to LE 16.4 million in 1953, LE 17.4 million in 1954, and LE 19.5 million in 1955. Its operations, however, are heavily concentrated upon short-term advances, and in each of the years referred to its medium-term and long-term loans were less than LE 0.5 million. Most of the advances are related to the supply of fertilizers, improved seeds, and other agricultural equipment. Over the years, the bank has made a significant contribution to the raising of agricultural productivity. In addition, it

[16] United Nations, Department of Economic and Social Affairs, *Economic Developments in the Middle East, 1945 to 1954:* Supplement to *World Economic Report, 1953–54* (New York, 1955).

TABLE 6. PAID-UP CAPITAL, LOANS AND ADVANCES, AND INTEREST RATES OF BANKS IN MIDDLE EASTERN COUNTRIES

	Year of Establishment of Bank	Paid-Up Capital (*million dollars*)	Loans and Advances	
			Outstanding, end of 1954 (*million dollars*)	Interest rate (*per cent*)
Egypt				
Agricultural Credit and Cooperative Bank	1931	4.3	34.0	5[1] / 7[2]
Industrial Bank	1949	4.3	5.7	—
Ethiopia				
Development Bank[3]	1951	3.1	3.0	7[4] / 6–8[5]
Iran				
Development Bank[6]	...	0.7	—	—
Agricultural Bank	1933	7.6	14.7[7]	—
Mortgage Bank	1938	3.2	—	—
Iraq				
Agricultural Bank[8]	1940	5.6	6.2[9]	...
Industrial Bank[8]	1940	7.6	6.7[10]	4.5
Lebanon				
Agricultural, Industrial, and Land Bank[11]	1954	1.6	1.5[12]	...
Pakistan				
Agricultural Development Finance Corporation	1952	6.3	1.2[13]	5[14]
Industrial Finance Corporation	1949	4.2	16.1[13]	5[14]
Housebuilding Finance Corporation	1952	6.3	5.3	5[14]
Syria				
Agricultural Bank[15]	1925	8.5	8.4	3–6[16]
Turkey				
Agricultural Bank	1888	88.9	536	2½–7[17]
Industrial Development Bank	1950	5.6	49	7
Real Estate Credit Bank	1927	41.8	121	5–7[18]

[1] Short-term rate for cooperatives.
[2] Medium-term rate for cooperatives.
[3] For both agriculture and industry.
[4] On loans to industry for a maximum period of seven years.
[5] On loans to agriculture, extended for three to five years.
[6] The Bank was established to be a depository of funds held by the Plan Organization and to carry out its banking transactions. Its charter includes the provision that it give financial assistance to private institutions engaged in production connected with the development program, but the bank has not been active in that capacity.
[7] Outstanding at end of February 1955.
[8] Originally established as the Agricultural and Industrial Bank of Iraq, the Bank was divided into the Agricultural Bank and the Industrial Bank in 1940. However, the law regulating this division was not put into effect until 1946.
[9] Outstanding at end of March 1954. Loans are limited to $8,400 per borrower.
[10] Of this amount, $3.2 million was equity in investments.
[11] The loanable funds are to be allocated two fifths to agriculture, two fifths to industry, and one fifth to real estate. The Bank is expected to obtain from the Bank of Syria and Lebanon up to LL 25 million (not exceeding LL 10 million in any one year), subject to guarantee by the Government.
[12] Outstanding at end of December 1955.
[13] Total loans up to the end of December 1955.
[14] For medium-term and long-term loans only.
[15] It has been proposed that the paid-up capital be raised to about $20 million. Six per cent of the proceeds of the agricultural production tax (yield about $0.5 million annually) would be allocated to the Bank for this purpose.
[16] On loans against mortgage of crops, 6 per cent; on other loans adequately mortgaged, 3 per cent for one year and 4 per cent for two years.
[17] Two and a half per cent on medium-term credits up to five years for purchase of agricultural equipment; 3 per cent on long-term credits up to 20 years; and 7 per cent on short-term credits of less than one year for financing crops. All these rates are subject to a revenue tax of 15 per cent.
[18] Five per cent on credits for small housing construction and 7 per cent on credits for other construction, plus a revenue tax of 15 per cent.

undertakes, on behalf of the Government, the procurement of cereals which, in the main, is not financed by commercial banks.

In the other countries the provision of agricultural credit has, so far, received inadequate attention. The financial institutions that have been set up are of recent origin, and the complexity and magnitude of the task involved indicate that it will be some time before they are able to extend their activities significantly. The absence of an active cooperative movement in most countries further limits the ability of these institutions to reach the agriculturists. Some of the institutions have also been confronted with legal difficulties in making medium-term and long-term loans on the security of land. In a number of cases, the existing laws were intended to save landowners from having their land expropriated by moneylenders; they have, in fact, made it impossible to negotiate loans. Suitable changes are being made to exempt the new institutions from such technical and legal difficulties.

While the basic factor restricting agricultural production is the very low capital investment in land, experience shows that the mere establishment of financial institutions may not by itself be enough. In order to make the operations of financial institutions really meaningful, it is equally important to carry out comprehensive programs of agricultural development and to introduce agricultural extension services. To persuade the villager to seek greater efficiency, to use new methods, fertilizers, improved seeds, etc., is not only a technical and a banking problem, but also a social one.

Industrial credit

In the field of industrial finance, the new institutions (almost all of which have been established within the last eight years) have done fairly useful work within the limitations imposed by the circumstances in which they operate. In some countries, e.g., Iran and Iraq, the financial resources available to the public authorities and the concentration of industrial development in the public sector have limited the scope of the operations of the new institutions.

The official policy in Turkey during recent years has been moving away from *etatism* (state capitalism) to the encouragement of private investment. To this end, the Industrial Development Bank was established in 1950; it is under private control and makes available loans and expert advice to industrial undertakings. Part of its capital was privately subscribed and the rest borrowed from the Central Bank or made available from U.S. aid (ECA counterpart funds); in addition, loans in foreign exchange ($18 million) were made available by the International Bank for Reconstruction and Development (IBRD). The Industrial Development Bank seems to be proving remarkably

successful; its loans outstanding at the end of 1954 totaled $49 million, and 266 enterprises had benefited from its operations.

The equity investments of the Bank Misr in Egypt (see Part I) in 1954 amounted to LE 10.8 million. The activities of the newly established Industrial Bank have, so far, been limited. Although the volume of loans made by the Industrial Finance Corporation in Pakistan has not been large, this has not been a factor limiting industrial expansion, for nearly $250 million has been invested in privately owned industrial establishments in the last seven years. The Government of Pakistan is contemplating the establishment of a private industrial bank on the Turkish model with the assistance and cooperation of the IBRD.

Among the aspects of industrial finance in the Middle East that deserve mention, the foremost is the fact that, in most countries, it is important to overcome the shyness which limits the participation of private capital in industrial ventures, and to build up an entrepreneur class. In order to attract private capital into the industrial field, it may be necessary in some instances for the State to sponsor certain projects itself in association with private capital, or to admit private capital after the projects have started functioning. The experience of Pakistan in this respect has been valuable. Second, in most countries, the financial institutions should be well equipped to offer technical advice concerning the projects they are expected to finance.

Finance is an important factor limiting the scope of the activities of both agricultural and industrial banks. Unable to attract sufficient deposits or to borrow in the local markets, these banks have looked mainly to their governments or central banks for financial assistance. In essence, therefore, their activities have to depend chiefly on central bank credit which has to be rationed within an over-all program of development. In such a situation, the utilization of the local currency proceeds of U.S. commodity aid programs, which are available to most countries in the Middle East, could provide a valuable base for the provision of agricultural and industrial credit on a more adequate scale than is presently the case. It is clear, however, that, in order to achieve self-reliance in the long run, the basic problem of developing capital markets needs to be tackled. This question is essentially linked with the establishment and growth of savings institutions—e.g., savings banks, life insurance institutions, investment houses—in which nearly all Middle Eastern countries are deficient and to which increasing attention must be given. Furthermore, the special financial institutions which have been set up have been content, so far, to play the role of a distributive agency. It is perhaps time that, instead of merely looking to their governments or central banks for financial support, they should also make a serious effort to attract time deposits and to tap the money markets, as far as possible, at suitable rates of interest.

III. Central Banking

Central banking in the Middle East is of recent origin, most central banks having been established within the last 15 years.[17] The principal need in most countries was for agencies to manage the currency and foreign exchange reserves, to act as banker and creditor to governments, and to promote the growth of banking. This was met in Iran and Ethiopia by the establishment of banks to perform both central banking and commercial banking functions. In Syria, until the Central Bank of Syria was established on September 1, 1956,[18] and in Lebanon, limited central banking functions have been exercised by a commercial bank, the Bank of Syria and Lebanon (BSL), which has acted as banker to both Governments, managed the currency, and in Syria was also custodian of commercial bank reserves.[19] In Egypt, comprehensive central banking functions are vested in a private bank which has restricted its commercial banking activities in order to reduce active competition with other banks.[20] Turkey, Iraq, and Pakistan have set up separate central banks.[21]

This brief description of central banking arrangements indicates that central banking is still in an evolutionary stage in the Middle East. Banking itself is still at an early stage of development, and money markets, in the real sense, hardly exist in most of the countries in the area. Under these circumstances, the role of most central banks has, so far, centered around currency and exchange management and the provision of banking facilities to their respective governments. In Iran and Ethiopia, the central banks have also contributed directly to a rapid growth of commercial banking services.

[17] Central Bank of the Republic of Turkey, 1931; Bank Melli Iran, 1928; Da Afghanistan Bank, 1941; State Bank of Ethiopia, 1942; State Bank of Pakistan, 1948; National Bank of Iraq, 1949 (now called Central Bank of Iraq); National Bank of Egypt, 1951 (*de jure* status as central bank).

[18] Until the establishment of the Central Bank, the Council on Money and Credit determined monetary policy. Exchange reserves were kept by the Exchange Office.

[19] The concessions enjoyed by the Bank of Syria and Lebanon (earlier known as the Bank of Syria) date back to the French occupation of Syria and Lebanon. The BSL was granted the right of issue, and it took over the agencies of the Ottoman Bank and the privileges held by that bank in Syria and Lebanon under Turkish rule. The 1939 Conventions (due to expire in 1964) determine the present relationships between the BSL and the Syrian and Lebanese Governments. The BSL has the sole right to issue notes and to receive and hold government deposits. Syria has since terminated the Convention, subject to the payment of an agreed compensation to the BSL.

[20] For details, see footnote 8. Necessary coordination between the National Bank of Egypt and the Ministry of Finance is provided by the Supreme Committee which is presided over by the Minister of Finance and whose decisions are final.

[21] The State Bank of Pakistan took over in July 1948 the functions previously exercised by the Reserve Bank of India—established in 1935. Forty-nine per cent of the State Bank's capital is privately subscribed.

Most of the central banks have not, so far, played any significant role as bankers' banks. This has been due to the undeveloped state of money markets, the conservative policies of commercial banks (coupled with their relatively liquid positions in some countries in the past), and, until recently, the generally static economic conditions of most countries. However, with the recent attempts to foster indigenous banking and in view of the rapidly increasing credit needs of the public and private sectors in most countries, central banks may be expected henceforth to play an increasingly important role in that capacity.

In countries where commercial banking is mainly in private hands, but where central banking functions have been entrusted to a commercial bank, the need for the establishment of separate central banks has begun to be felt. An improvised arrangement under which a commercial bank, itself guided by the profit motive and actively engaged in competition with other banks, is also entrusted with central banking functions, can hardly be expected to function smoothly at all times. Furthermore, such an arrangement cannot inspire the necessary confidence in the banking system as a whole. It is perhaps partly with such considerations in mind that Syria established the Central Bank of Syria. The speeches made when the Bank was established also suggest, however, that a full-fledged central bank has come to be regarded as one of the hallmarks of national sovereignty and independence.

As the concluding portion of this paper indicates, monetary and price stability have, so far, been fairly well maintained in the area as a whole. The main expansionary trends in some countries stem from large government outlays on economic development (mostly on long-term schemes of basic development), unaccompanied by a commensurate growth in real savings and an adequate inflow of capital. In the circumstances, heavy reliance has been placed on central bank financing of development expenditures. Except in the oil-producing countries, this is likely to remain the key problem facing most central banks in the Middle East. It is pertinent that, under the stress of this problem and profiting from the experience of the last few years, most governments and central banks are beginning to give increasing attention to the formulation of more definite monetary policies involving closer coordination in the fiscal and credit fields.

Currency management

The statutes of most central banks in the Middle East require that the central banks maintain proportional reserves of gold and foreign assets (Table 7). On the whole, these reserve requirements permit as much flexibility as is consistent with the maintenance of currency stability. The locking up of minimum reserves in the manner required

	Minimum Legal Provisions	Actual Position, Dec. 31, 1955	Remarks
Egypt	Note issue must be covered by an equivalent holding of gold, foreign assets, and government paper	Gold and foreign assets 68%; government paper 32%	The proportions of the components of the note cover are not fixed; they are subject to agreement between the National Bank of Egypt and the Ministry of Finance.
Ethiopia	30% in gold, silver, and foreign assets; balance in treasury bills	Gold, silver, and foreign assets 51%; treasury bills 49%	
Iran	40% in gold and foreign assets; balance in government paper and crown jewels	Gold 38%; foreign assets 2%; government paper 60%	Of the gold and foreign assets, a minimum of 87.5% must be in gold; the foreign assets must be freely convertible into gold. Increase in currency above level of June 29, 1954 is limited to increase of the equivalent of $30 million in gold and foreign assets.
Iraq	70% in foreign assets; balance in Iraqi Government securities	Foreign assets 85%; gold 6%; government securites 9%	The law does not provide for gold as a component of the cover. The central bank has, however, recently begun to acquire gold.
Lebanon	50% in gold and foreign assets; balance in treasury bonds and commercial paper	Gold 95%; treasury bonds 5%	A minimum of 30% of the total cover must be in gold.
Pakistan	30% in gold, silver, sterling, or approved foreign exchange; balance in rupee coin, government and commercial paper eligible for purchase by the State Bank of Pakistan	Gold and approved foreign assets 57%; domestic assets 43%	Gold and foreign assets in the statements of the State Bank as being held by the Reserve Bank of India pending their physical transfer are included in monetary reserves.
Syria	30% in gold and foreign assets; balance in government and commercial paper	Gold and foreign assets 23%; government obligations and guarantees 77%	This requirement is recent and, pending attainment of the 30% level, law permits a minimum of 10% in gold and foreign assets.
Turkey	None	—	There is legal limitation on note issue. Volume of notes issued is determined by Board of Directors of Central Bank of Turkey.

by these statutory limitations may impose a rigidity upon the currency system that in certain emergencies might be harmful, especially in countries such as those in the Middle East where current exchange earnings are likely to be affected by wide fluctuations in production and in prices. There is a certain lack of logic in a rule that forbids the use of reserves for the purpose for which they have been accumulated, i.e., the protection of the value of the currency. In these circumstances and in order to provide for necessary flexibility in the note issue, the reserves actually held must in practice usually exceed the prescribed minimum. However, in countries where the masses of the population are illiterate, prudence requires that special precautions be taken to establish and maintain their confidence in the note issue; and the legal reserve requirements are apparently intended to provide the assurances necessary for this purpose. In Iraq, the minimum cover in gold and foreign exchange is as high as 70 per cent; in view, however, of Iraq's growing oil reserves, this requirement is not likely to affect the flexibility of the note issue. In some countries, a temporary suspension of the statutory requirements is permitted in certain circumstances. The provision embodied in the statutes of Pakistan and Lebanon, which permits the central bank to include short-term commercial and agricultural bills as part of its statutory reserve, not only permits flexibility in the note issue and in bank credit, but also encourages the development of a bill market.

Commercial bank reserves

Except in Lebanon and Ethiopia, the commercial banks are required to maintain minimum reserves with their central banks. These minimum reserves vary from 2 per cent on time deposits and 5 per cent on demand deposits in Pakistan to about 15 per cent in the other countries (Table 8). In prescribing reserve ratios, most countries draw no distinction between time and demand deposits; with the growth of time deposits, however, such a distinction may be desirable. The reserve requirements have not, so far, been put to any effective use as a tool of monetary policy, and their primary objective has been to ensure safety of deposits and bank liquidity. In a few cases, however, the ratios have been varied; reserve requirements in Syria were raised from 10 per cent to 15 per cent in 1955 when commercial bank advances showed an undue increase, and in Egypt they were lowered from 15 per cent to 12½ per cent in 1954 when commercial banks were in need of more funds. In Iran, interest of 1 per cent is allowed on bank reserves, and in Iraq, one third can be lodged in the form of government securities. In Turkey, bank reserves are deposited with the

Table 8. Reserve Requirements of Commercial Banks in the Middle East

Remarks

TABLE 8. RESERVE REQUIREMENTS OF COMMERCIAL BANKS IN THE MIDDLE EAST

	Minimum Reserve Requirements	Position on Dec. 31, 1955	Remarks
Egypt	Deposit with the National Bank of Egypt equivalent to 12½% of private deposits	23%	—
Ethiopia	None	—	The State Bank of Ethiopia, which is the central bank, holds over 90% of private deposits.
Iran	Deposit with the Bank Melli Iran (BMI) equivalent to 15% of demand deposits and 5% of time and savings deposits. (Reserves bear 1% interest.) These requirements do not apply to the Commercial Department of the BMI. Foreign banks have separate ratios determined by the Bank Control Board.	Deposits of commercial banks with the BMI were 65% of the banks' total demand and time deposits[1]	In addition, a commercial bank's short-term assets, including credit with the BMI, must not be less than 40% of its short-term liabilities. This provision applies to the Commercial Department of the BMI.
Iraq	Deposit with the central bank of Iraq equivalent to 15% of private deposits	24%	A minimum of 66.67% of the reserves must be in Iraqi currency; balance is in Iraqi Government bonds.
Lebanon	None	...	There are no regulations covering reserve requirements.
Pakistan	Deposit with State Bank of Pakistan equivalent to 5% of demand liabilities and 2% of time liabilities	7% of total demand and time liabilities (excluding interbank transactions)	These reserve requirements apply to scheduled banks, which hold a preponderant share of private deposits.
Syria	Cash in till plus deposit with the Bank of Syria and Lebanon equivalent to 15% of demand deposits	29%	There are no reserve requirements for time and savings deposits.
Turkey	Government paper and deposits with Central Bank equivalent to 20% of demand, time, and savings deposits	...[2]	May be increased to 25%.

[1] Judging by the requirements of the private sector in Iran and the high interest rates prevailing outside the banking system, the level of excess reserves on deposit with the Bank Melli Iran is somewhat surprising. Apparently, however, prospective borrowers do not have an adequate security to offer and the newly established commercial banks are unwilling to take undue risks.

[2] Commercial banks' deposits with the Central Bank and their total holdings of government paper at the end of 1955 comprised 28 per cent of their deposit liabilities. But this percentage does not reflect correctly the position of reserves held against deposits, since the total of government paper also includes reserves that are maintained against legally required capital reserves. Separate data on reserves maintained against deposits alone are not available.

Amortization Fund,[22] which uses them for the financing of state-owned enterprises, a practice which is scarcely consistent with the purpose for which such reserves are required. In view of the limited use made of the discount rate by Middle Eastern countries and the narrow scope for open market operations, variable reserve ratios could be used by central banks as an instrument of monetary policy with considerable effect. This suggests a wider and more flexible delegation of powers to central banks in prescribing reserve requirements as the needs of the situation warrant.

In some of the Middle Eastern countries, commercial bank advances undergo a marked seasonal variation, which is greatest in the winter months (October-March). On the other hand, bank liquidity is highest in the period April-August. The banks are thus in need of some accommodation from the central banks in the busy winter months and need suitable avenues for short-term investments in the slack season. Egypt and Pakistan (and to some extent, Iraq) are typical instances. Ordinarily, open market operations and the availability of treasury bills could play a useful role in such a situation because of the automaticity with which the seasonal stringency of funds could be relieved in the winter months and short-term investments provided in the slack season. However, because of the absence or narrowness of government security markets, which itself is due mainly to the low level of bank deposits, open market operations are at present not of any significance except, perhaps, in Pakistan. Treasury bills are issued in Egypt and Pakistan, but their volume is limited. The low rates of interest at which treasury bill tenders are accepted may have been partly responsible for the low offerings by commercial banks. In these countries, there is some further scope for developing treasury bill markets, provided interest rates are suitable; but, at least for the time being, the development of such a market would be intended to meet the needs of the short-term money market rather than to satisfy the Governments' cash requirements. In most other countries, e.g., Lebanon, Syria, Turkey, the issuance of treasury bills does not, in present circumstances, appear feasible.

Role of discount rate

The discount rate has, so far, played a minor role in most Middle Eastern countries. While a few changes in the rate have been made in certain countries, its significance as an instrument of monetary policy has not been important. For one thing, the short-term money markets

[22] The banks have the option of depositing their reserves with the Amortization Fund or investing them in government bonds. They have preferred the Fund, since this enables them to earn a higher return.

in the area are hardly analogous to their counterparts in more developed countries; and for another, the very nature of commercial bank operations in the Middle East, with their heavy emphasis on the export sector, does not call for the frequent use of the discount rate. Thus, in Pakistan, Iraq, Iran, and Ethiopia, the discount rates have undergone no change in the postwar years. In Egypt, except for a few months in 1952 (July-October) when the discount rate was raised by ½ per cent, it has remained unchanged at 3 per cent since 1951 when the National Bank of Egypt began to quote a rate. In Syria, the discount rate was raised on a selective basis in 1955 from 3 per cent to 3¼–3½ per cent, but the increase was not large enough to be fully effective. In Turkey, it was raised from 3 per cent to 4½ per cent in June 1955 and to 6 per cent in June 1956. In view, however, of the somewhat deep-seated inflationary situation in Turkey, an increase in the discount rate is hardly likely to be effective unless accompanied by other far-reaching measures involving a cutback in investment, deficit financing, and the over-all volume of credit.

The generally low discount rates in the Middle East are a reflection of the low interest rate patterns within the banking system and are indicative of a desire to follow cheap money policies. There is thus a conflict between the provision of cheap credit (including the governments' own credit needs) and the need to stimulate savings. The discussion of interest rates earlier in this paper indicates that it may be useful for central banks to review their discount rate policies. For the promotion of development with stability, the balance of advantage seems to be with policies that promote a larger flow of savings, and to that extent place less reliance on central bank financing.

In present circumstances, the traditional weapons of monetary policy cannot be expected to play any significant role in Middle Eastern economies. The main reliance in controlling credit will continue to be placed on measures of selective credit control.[23] Within these general limitations, the recent fall in bank liquidity in most countries suggests that variable reserve ratios and changes in discount rates (whenever considered necessary and appropriate) are henceforth likely to prove more effective than they might have been in the past.

Banking control

Banking control is exercised on a limited scale in most countries in the area, but increasing attention is being given to it in view of the

[23] This has reference to the use of selective credit controls as purely short-term expedients. For the general use of such controls in developing economies, see I.G. Patel, "Selective Credit Controls in Underdeveloped Economies," *Staff Papers*, Vol. IV (1954–55), pp. 73–84.

establishment in recent years of a number of local banks, some of which have given indications of unsound banking practices. In most countries, commercial banks are required to render periodic returns to the central banking or monetary authorities. In a number of countries, there is a need for comprehensive banking legislation independent of the company laws which presently apply also to banks. Pakistan has partially met the deficiency through a special law (the Banking Companies' Control Act), which vests in the State Bank wide powers of inspection and banking control in order to ensure the development of sound banking practices. Iraq, and more recently Syria and Iran, have passed comprehensive legislation to regulate the establishment and activities of commercial banks. Encouragement of the growth of sound commercial banking throughout the economy is a subject that needs greater attention on the part of central banks in the Middle East.

IV. General Appraisal of the Middle Eastern Monetary Situation

The statutes of most central banks in the Middle East place particular emphasis on maintaining the value of currencies and the maintenance of monetary stability. An evaluation of the position in this respect would embrace the whole field of fiscal operations, balance of payments, and monetary policy; and this would require a more comprehensive study than can be attempted here. The figures given in Table 9 for the years 1948–54 relating to money supply and the activities of the banking system are, however, illustrative of the general picture, which may usefully be supplemented by some notes on recent trends in particular countries.

Price trends in the Middle East during the postwar period necessarily have to be considered in the light of wartime developments. During World War II, almost all Middle Eastern countries experienced inflation, to a greater or lesser extent, owing to the increased pressure on domestic resources unaccompanied by any corresponding inflow of supplies. This increased demand took the form of heavy direct military expenditures or purchases by the armed forces and larger export surpluses resulting from greater demand for products of the area. Various forms of price and other controls were attempted, but these failed to prevent substantial price increases. By 1948, however, the cost of living was rising less steeply and a reasonable degree of price stability was restored. Larger availabilities in the postwar period, coupled with the availability of substantial exchange reserves accumulated by most countries during the war, helped restore prices (which during World

TABLE 9. MONEY SUPPLY, VOLUME OF BANK ADVANCES TO THE PUBLIC AND PRIVATE SECTORS, MOVEMENT OF GOLD AND FOREIGN EXCHANGE RESERVES, PRICE AND COST OF LIVING INDICES, 1948–54

(Money supply and bank advances in millions of U.S. dollars)[1]

	Money Supply			Commercial Bank Claims on Private Sector		Commercial Bank Claims on Government		Central Bank Claims on Government		Increase (+) or Decrease (−) in Gold and Other Foreign Assets	Index of Wholesale Prices		Cost of Living Index	
	1948	1954	Percentage change, 1948–54	1948	1954	1948	1954	1948	1954	1948–54	1948	1954	1948	1954
											(*1953 = 100*)			
Egypt	1,071	1,030	−2	244	445	17	29	34	132	−366	93	97	95	96
Ethiopia[2]	37	62	68	4	5[3]	—	—	13	28[3]	+33	88[4]	76[4]	...	...
Iran	166	312	88	58	107	—	—	76	150	−60	89	118	94	118
Iraq	137	179	31	17[5]	70	10	5	17[5]	28	+75	125	96	137	98
Lebanon	118	188	59	69[6]	124[6]	...	...	...	...	+1	128	92	114	95
Pakistan	570	806	41	86	207	...	129	53[5]	306	−467[7]	...	...	89	94
Syria[8]	86	123	43	45	123	26	11	53	67	+27	—	—	100[9]	89[10]
Turkey	611	1,382	126	297	1,333	102	210	281	555	−64	93	112	89	110

Sources: International Monetary Fund, *International Financial Statistics;* Syrian Council on Money and Credit; Syrian Monetary Agency; and State Bank of Ethiopia.

[1] See footnote 1, Table 2.
[2] Data for State Bank of Ethiopia.
[3] 1953.
[4] Averages of export and import price indices for 1950 and 1954.
[5] 1950.
[6] May include advances to public institutions and the Government.
[7] The decline includes also the loss occurring because of the devaluation of sterling and the Indian rupee in September 1949.
[8] Figures are for 1952 and 1954.
[9] 1949.
[10] Retail price index.

War II had risen threefold to tenfold) to a level more in line with world prices. The raw materials boom in 1950 and 1951 (resulting from the Korean war), which also affected import prices, again introduced inflationary pressures for a time, but by the middle of 1952 its effects had subsided. During this period, a number of countries increased duties on raw material exports in order to minimize the inflationary impact of the commodity boom.

In more recent years, it appears that, except in Turkey, where a fairly serious inflation continues, monetary stability has been rather well maintained in the area. The volume of bank advances to the private sector has, in general (and with the exception of Turkey), supported the genuine needs of expanding economies. In countries where the money supply has risen at a fast pace, this has been accompanied by substantial central bank financing of public expenditures (Turkey, Pakistan, and Iran).

More specifically, in Egypt, Iraq, Syria, Lebanon, and Ethiopia, there has been a remarkable degree of monetary stability. Iraq has enjoyed the happy position of being able to finance its large public outlays almost entirely from its growing oil income. Thus, while the money supply has increased, it has been possible to maintain price stability ever since 1952 through a liberalization of imports. Prudent fiscal and commercial bank policies and ability to draw on large exchange reserves accumulated during World War II enabled Egypt to maintain monetary and price stability during the period under review. As in some of the other countries, the task of monetary management is likely to become more difficult in Egypt, once the development program gets under way and the exchange reserves are depleted.

In Syria, there was a considerable expansion of commercial bank credit in 1954 and 1955, which, coupled with a bad harvest, seemed to threaten monetary stability. Although price stability was maintained, it was achieved at the expense of a considerable use of exchange reserves. Bank advances were in no small measure related to consumer installment credit. To meet the situation, the Council on Money and Credit took measures, including selective credit control, imposition of margins on the opening of letters of credit, and a slight increase in the discount rate. As a result of these measures and a better harvest in 1956, the position has since been restored to normal. In Pakistan, substantial government outlays on development, accompanied by public debt operations financed by the banking system, including the central bank, have been the main factors leading to an increase in the money supply. In the initial stages, monetary stability was maintained by drawing on sterling balances, but as these were depleted, prices of consumer goods began to rise substantially during 1954. The situation has

since been relieved by U.S. assistance and rising domestic production. In Iran, as well, substantial budgetary deficits financed by central bank accommodation have been the main cause of the inflationary trend. The situation has improved as a result of U.S. assistance and the resumption of oil production.

The foregoing survey indicates that the record of the monetary authorities in maintaining monetary stability has, with one or two exceptions (e.g., Turkey), been satisfactory. As stated earlier, the main threat to monetary stability arises, or is likely to arise, from too rapid programs of expansion undertaken by the public authorities. This essentially involves a task of matching projected outlays with available resources, both domestic and foreign. To lift the level of real savings by a combination of fiscal and monetary policy is part of this problem. The central banks in various countries have repeatedly drawn attention to the dangers inherent in the undertaking by public authorities of programs more ambitious than the availability of real resources warrants. Whether the voice of the central banker will prove effective remains a question. It is clear, however, that a more effective coordination of fiscal and monetary policies appears indicated. Amidst the understandable urge for economic and social development, realism on the part of the fiscal authorities and the level of foreign aid are likely to be the principal factors in maintaining economic development with monetary stability and thus avoiding social discontent.

Interest Rates Outside the Organized Money Markets of Underdeveloped Countries

U Tun Wai*

IN AN EARLIER STUDY[1] an examination was made of the interest rate structure and the lending practices of organized money markets in underdeveloped countries, and it was shown that these differed much less than might have been expected from those prevailing in most developed countries. In underdeveloped countries, however, unorganized money markets also play a very important role, and any study of credit conditions in these countries that is to be adequate must be extended to cover the unorganized as well as the organized markets. Efforts have often been made to repair the deficiencies of the unorganized markets by government action designed to stimulate the development of cooperative credit or to provide credit through agricultural banks, etc.; it is convenient to include these government-sponsored institutions in a study of unorganized money markets in general.

Interest rates in the unorganized money markets of underdeveloped countries are generally very high in relation both to those in the organized money markets and to what is needed for rapid economic development. These high interest rates are caused by a disproportionately large demand for loanable funds coupled with a generally inelastic and limited supply of funds. The large demand stems from the special social and economic factors prevalent in the rural areas of underdeveloped countries. The low level of income leaves little surplus for saving and for the accumulation of capital for self-financing of agricultural and handicraft production. The uncertainty of the weather, which affects crop yields and incomes, causes an additional need for outside funds in bad years. A significant portion of the demand for loanable funds in rural areas is for financing consumption at levels much higher than are warranted by the low income of the peasant. These standards of consumption have been influenced by reasons of

* Mr. U Tun Wai, Assistant Chief of the Finance Division, was educated at the University of Rangoon, the University of Bombay, and the Yale Graduate School. Formerly Lecturer in Economics at the University of Rangoon and economist in the secretariat of the Economic Commission for Asia and the Far East, he is the author of *Burma's Currency and Credit*.

[1] U Tun Wai, "Interest Rates in the Organized Money Markets of Underdeveloped Countries," *Staff Papers*, Vol. V (1956–57), pp. 249–78.

prestige and custom; for example, the large expenditures needed for marriages, religious festivals, funerals, etc., are on a socially prescribed minimum standard above the reach of the average peasant.[2]

The supply of loanable funds in the unorganized money markets is very limited and inelastic because the major source is the moneylender, and only very small quantities are supplied by indigenous bankers and organized institutions, such as cooperative credit societies and land mortgage banks. The moneylender in most cases is also a merchant or a landlord and therefore is willing to lend only at rates comparable with what he could earn by employing his capital in alternative uses which are often highly profitable. The lenders in the unorganized money markets do not have the facilities for mobilizing liquid funds available to commercial banks in organized markets and therefore the supply of funds is rather inflexible. Since the unorganized money markets are generally not closely connected with the organized money markets, there is little possibility of increasing the supply of loanable funds beyond the savings of the lending sector of the unorganized money markets. The limited supply of loanable funds indeed reflects the general shortage of capital in underdeveloped countries.

The disadvantages of the high rates of interest in the unorganized money markets are well known and include such important effects as "dead-weight" agricultural indebtedness, alienation of land from agriculturists to moneylenders and the agrarian unrest that is thus engendered, and a general slowing down of economic development. This paper is concerned mainly not with these problems, but with the nature of the unorganized money markets, the structure and pattern of interest rates prevailing therein, the connection between unorganized and organized money markets, and the implications of such institutional factors for the formulation of monetary policy in underdeveloped countries. Attention is also given to governmental efforts to reduce interest rates in unorganized money markets.

Nature and Size of the Unorganized Money Markets

The organized money markets in underdeveloped countries are less fully integrated than the money markets in developed countries. The unorganized money markets in underdeveloped countries are even more

[2] In India it was estimated by the Provincial Banking Enquiry Committees in 1930 that unproductive debt constituted about 60 per cent of total debt in Madras and 70 per cent in Bengal, the United Provinces, and Bombay. In Pakistan, the Board of Economic Enquiry estimated in 1951 that 70 per cent of the rural debt of the Punjab was for current domestic requirements.

imperfect, and indeed it is questionable whether the existing arrangements should be referred to as "markets." They are much less homogeneous than the organized markets and are generally scattered over the rural sector. There is very little contact between the lenders and borrowers in different localities. The usual textbook conditions for a perfect market are completely nonexistent: lenders and borrowers do not know the rates at which loans are being transacted in other parts of the country; the relationship between borrower and lender is not only that of a debtor and creditor but is also an integral part of a much wider socioeconomic pattern of village life and rural conditions.

In unorganized money markets, moreover, loans are often contracted and paid for not in money but in commodities; and the size of the average loan is very much smaller than in the organized money markets. Both borrowers and lenders in the two markets are often of quite different types. In the organized money markets, the borrowers are mainly traders (wholesale and retail) operating in the large cities and, to a less extent, manufacturers. Agriculturalists rarely account for a significant portion of demand except in those underdeveloped countries where export agriculture has been developed through plantations or estates. In the unorganized money markets, the borrowers are small agriculturalists, cottage industry workers, and some retail shopkeepers. The lenders in the organized money markets consist almost exclusively of commercial banks. In the unorganized markets, the suppliers of credit consist of a few financial institutions, such as cooperatives, private and government-sponsored agricultural banks, indigenous bankers, professional moneylenders, large traders, landlords, shopkeepers, relatives, and friends. Proper records of loans granted or repaid are usually not kept, and uniform accounting procedures are not adopted by the different lenders. Loans are granted more on a personal basis than in the organized money markets,[3] and most of the loans granted by the moneylenders and by other noninstitutional sources are unsecured beyond the verbal promise of the borrower to repay.

The unorganized money market may be divided into three major parts: (1) a part in which the supply is dominated by indigenous bankers, cooperatives, and other institutions, and the demand by rural traders and medium-sized landlords; (2) a part in which the demand originates mainly from small agriculturists with good credit ratings, who are able to obtain a large portion of their funds from respectable

[3] Even in the organized money markets the commercial banks depend on the personal assessment by the manager of the creditworthiness of the borrower. However, these assessments are translated into financial terms and the credit rating of a borrower is not impaired by the transfer of a branch manager.

moneylenders, traders, and landlords at high but reasonable rates of interest, i.e., rates that are high in relation to those prevailing in the organized money market but not exorbitant by the standards of the unorganized money market; (3) a part in which the demand originates from borrowers who are not good credit risks, who do not have suitable collateral, and who in consequence are driven to shady marginal lenders who charge exorbitant rates of interest.

The dividing line between the second and third parts of the market is rather narrow, mainly because the same borrowers and lenders may operate in both parts. For example, a professional moneylender may charge reasonable rates of interest to an agriculturist who is a good credit risk and has suitable collateral to offer; at the same time, he may not hesitate to use a portion of his funds to lend at very high rates of interest and thus operate as a loan shark. Similarly, a borrower who can satisfy most of his financial needs in the second part of the market may approach a loan shark for marginal borrowing, especially in times of emergency. Most often, however, it is probably the borrower rather than the lender who operates in both the second and third parts of the market.

Unorganized money markets are located mainly in rural areas and therefore the demand for and supply of loanable funds originate mainly from the agricultural sector. Parts of the markets, however, are to be found in urban areas. Moneylenders are known to operate in the cities for financing small business units and some consumer expenditures. Pawnshops also operate mainly in urban areas, and such credit institutions belong to the unorganized rather than to the organized money markets.

The fact that unorganized money markets cater mainly to the financial needs of the agricultural sector, which is of greater importance in an underdeveloped country than in a developed country, justifies the conclusion that the relative importance of the unorganized money market is probably much greater in underdeveloped than in developed countries. In many of the developed countries of Western Europe, the share of national income originating in agriculture is only about 15–20 per cent and in the United Kingdom and the United States it is between 5 per cent and 10 per cent. In the underdeveloped countries, agriculture ordinarily accounts for about half of national income, and some two thirds to three fourths of the total population is commonly dependent on agriculture.

The relative size of the unorganized money markets may be roughly estimated by comparing the value of agricultural[4] or rural indebtedness

[4] For most underdeveloped countries, agricultural indebtedness comprises the major portion of rural indebtedness. Thus, for example, in Pakistan, according

outstanding with the claims of the banking system on the private sector. Data for making such a comparison sufficiently reliable to permit more than a rough approximation are available for only a few countries.[5] For all of these countries except Ceylon, however, it is significant that agricultural or rural indebtedness exceeds the claims of the banking system on the private sector of the economy, a fact which suggests that in these countries the unorganized money markets are more important than the organized.

A comparison of agricultural or rural indebtedness with currency in circulation gives a rough indication of the extent to which the unorganized money markets have developed in relation to their potentialities. The assumptions here are that, other things remaining the same, the currency in circulation within a country increases (1) with economic growth and (2) as the agricultural sector becomes more monetized. The second assumption, in other words, is that a country having a large subsistence economy would use very little currency, while another country having only a small subsistence economy would tend to have a larger amount of currency in circulation. Having a monetized agricultural or rural sector, however, does not necessarily mean that debt and credit are developed. Therefore, the amount of agricultural or rural indebtedness in relation to the amount of currency in circulation gives a rough approximation of the extent to which the unorganized money market has developed.

A comparison of agricultural or rural indebtedness with agricultural income and national income probably gives an indication of whether such indebtedness is too large or too small. In agriculture, as in other sectors, the borrower in the unorganized money market may suffer (and has suffered) both from having too much credit and from having too little. Generally speaking, in a number of underdeveloped countries, such as Burma, India, and Mexico, the volume of agricultural indebtedness before the great depression of 1929 was rather large and

---

to the survey conducted by the Board of Economic Enquiry in the Punjab in 1951, agricultural indebtedness amounted to about 80 per cent of rural indebtedness.

[5] For a detailed analysis of the data available for making this comparison and for a comparison between agricultural or rural indebtedness and currency circulation, see Appendix, Table 8. The data for Burma, Ceylon, El Salvador, India, Pakistan, and Thailand are based on farm surveys or special surveys, and may therefore be regarded as fairly reliable. The assumptions on which the calculations have been based are listed in the notes to Table 8. In assessing the significance of these calculations, it should be borne in mind that part of agricultural indebtedness is "dead-weight" debt, i.e., debt which the agriculturist can never hope to repay, and which would have been written off if it had been incurred in an organized money market. The importance of "dead-weight" debt is impossible to estimate accurately. It is probably less now than before the war, because of government measures which have scaled down the volume of agricultural indebtedness and of favorable agricultural prices in some postwar years.

had been expanding fairly rapidly. This rapid expansion was brought about by a fairly long period of rising prices of agricultural products. The large amount of indebtedness was not a serious handicap when agricultural incomes were rising, but a severe blow was dealt to the agriculturist when agricultural prices fell more than prices of industrial products in the thirties. The amount of credit available in the unorganized money market generally declined, and it might be said that in the thirties the agriculturists in underdeveloped countries suffered from having too little credit. The postwar years have seen some expansion of agricultural credit in many countries, but it is doubtful whether the actual volume has reached the level that existed in most countries before the great depression. Thus, for example, it has been estimated for Cyprus that the volume of agricultural indebtedness in 1952 was only about one half that of 1928. For other countries, such as Burma, India, and Thailand, the situation seems to be similar to that of Cyprus. In Ceylon in 1950 nearly 70 per cent of the farmers were free from debt, while in 1936–38 this was true of only 25 per cent.

In attempting to estimate the desirable volume of rural indebtedness, it should be borne in mind that there is hardly one among the developed countries, where credit is utilized to a large extent, in which the claims of the banking system on the private sector are larger than half the national income, and that for most countries these claims equal between 25 and 50 per cent of national income.[6] The desirable amount of indebtedness for agriculturists depends on many factors—the most important being the productivity of borrowed capital, the rate of interest, and the time period of the loan. As the turnover of capital in agriculture is much slower than in industry, and interest rates in the unorganized money markets of underdeveloped countries tend to be high and must inevitably be higher than in the organized money markets, it may be concluded that any volume of rural indebtedness that exceeds 50 per cent of income originating from the agricultural sector is too much. On the other hand, since borrowers in the organized money markets typically have greater capacity for self-finance, rural indebtedness between 25 and 50 per cent of agricultural income may be reasonable. Indebtedness below one fourth of agricultural income is probably too little, and credit less than 10 or 15 per cent of income seems definitely inadequate. These estimates refer to current debt for productive purposes.

[6] See U Tun Wai, *op. cit.*, Table 2, p. 252.

Sources of Credit

The supply of credit in the unorganized money markets comes from noninstitutional sources, i.e., from individuals who are either professional moneylenders or landlords, relatives, or friends of the borrowers, as well as from institutions, such as cooperative banks, agricultural banks, and the government. For many countries no data are available, but the record of the countries listed in Table 1 suggests that noninstitutional sources are much more important than institutional sources in the supply of agricultural or rural credit in underdeveloped countries. This is not surprising because even in the United States, a highly developed country, it has been estimated that over 40 per cent of agricultural credit is supplied from noninstitutional sources. In Japan only about half the total supply comes from noninstitutional sources, since the financial structure is well developed. The statistics for Ceylon in Table 1 may be subject to some error, because different sources have been combined; but Ceylon's low percentage of noninstitutional credit is partly explained by the fact that its financial structure is more highly developed than that of most underdeveloped countries.

For other countries, the relative importance of institutional credit in the unorganized market may be estimated by an indirect method based on a number of alternative hypotheses. The detailed results of these estimates are shown in Table 9 (Appendix). On any of the hypotheses examined, the importance of institutional credit is seen to be rather small in many underdeveloped countries.

In addition to the traditional sources of credit in the unorganized money markets, a new source has been opened to countries receiving aid from the United States in postwar years through the creation of counterpart funds. In many countries, these funds have been utilized for direct loans to agriculturists or for creating new financial institutions to operate within the unorganized sector. In Japan, counterpart funds have been used to extend long-term loans to agriculture, forestry, and fisheries, in addition to industry; but the loans to agriculture have been rather small. In the Philippines, counterpart funds have been used by the Rehabilitation Finance Corporation to purchase shares and to grant loans to the newly established rural banks. In Indonesia, the Apex Cooperative Bank has been established with a capital of Rp 100 million provided from counterpart funds. In Iran, part of the capital of the Development Bank originated from U.S. aid funds.

Generally speaking, however, foreign capital from governmental sources such as these was not available before the war to supplement the supply of loanable funds in the unorganized money market, although there have been instances of private foreign capital entering local unorganized money markets. For example, before the great de-

TABLE 1. SOURCES OF AGRICULTURAL CREDIT[1]

(In per cent of total)

	Ceylon (Fiscal 1950–51)	India (Fiscal 1951–52)	Japan (1950)	Pakistan[2] (1951)	Thailand (Fiscal 1952–53)	United States (1952)
Institutional sources	46	7	49	16	16	58
Commercial banks	8[3]	*1*	*3*	—	—	*30*
Cooperatives	7[4]	*3*	} 45[5]	*13*	*16*	5[10]
Government and government-owned institutions	*31*[5]	*3*		*3*	*1*	4[11]
Other	—	—[7]	*1*[7]	—	—[7]	*19*[12]
Noninstitutional sources	54	93	51[9]	84	84	42
Professional moneylenders	*50*	*70*	...	*1*	*20*	...
Traders and shopkeepers	} 4[6]	*6*	...	*3*	*17*	...
Landlords		2	...	*17*	*1*	...
Relatives, friends, and others		*16*	...	*63*	46	...

[1] Some of the classifications in the publications from which the data have been compiled differ significantly from those adopted in this table. For Ceylon and Pakistan, rural credit data are used. In some cases, the components do not add up to 100 because of rounding.

[2] Supply of credit to the rural sector in the Punjab only.

[3] Data relate to the end of 1950.

[4] Loans owed by individuals to credit (limited and unlimited), thrift, and land mortgage cooperative societies at the primary level at the end of April 1951.

[5] Agricultural loans outstanding of the State Mortgage Bank and the Agricultural and Industrial Credit Corporation (estimated from total loans outstanding and the ratio of loans to agriculture to total loans during 1947/48–1950/51) at September 1951.

[6] A residual item and therefore subject to considerable error.

[7] Estimated from the residual item "others," in the publication from which the figure was derived, by applying the ratio of known institutional to noninstitutional credit.

[8] The sum of credit supplied by cooperative associations and mutual loan associations.

[9] The sum of credit supplied by merchants and private individuals plus the estimated portion of the residual item "others" (2.4 per cent) given in the publication cited below.

[10] Credit supplied by Production Credit Associations, which includes discounts at Federal Intermediate Credit Banks of agricultural credit corporations and livestock loan companies.

[11] Credit supplied by the Farmers Home Administration.

[12] The sum of credit supplied by life insurance companies and Federal Land Banks. Statistics of Federal Land Banks include the Federal Farm Mortgage Corporation.

SOURCES OF DATA, BY COUNTRY

CEYLON. Department of Census and Statistics, *Final Report on the Economic Survey of Rural Ceylon, 1950–51* (Colombo, 1954), and *Statistical Abstract of Ceylon, 1951* (Colombo, 1951), p. 284; Cooperative Department, *Administration Report on the Working of Cooperative Societies, 1950–51* (Colombo, 1951), Appendix B.

INDIA. Reserve Bank of India, *All-India Rural Credit Survey* (Bombay, 1954), Vol. 2, p. 167.

JAPAN. Hideo Tokoro, "Agricultural Credit in Japan," International Conference on Agricultural and Cooperative Credit, University of California, 1952, *Proceedings* (Berkeley, Calif., 1952), Vol. 2, p. 849.

PAKISTAN. Board of Economic Inquiry, Punjab, *Report on the Need and Supply of Credit in the Rural Areas of the Punjab: Inquiry Conducted by Hassan Ali Syed* (Lahore, 1951).

THAILAND. Ministry of Agriculture, *Thailand Economic Farm Survey, 1953* (Bangkok, 1953).

UNITED STATES. Norman J. Wall, "Mobilizing Capital for Agriculture in the United States," Economic Commission for Asia and the Far East, *Mobilization of Domestic Capital: Report and Documents of the Second Working Party of Experts* (Bangkok, 1953), p. 248.

pression the Chettiars of India financed a significant portion of agricultural production in Burma, Ceylon, Indo-China, Malaya, and Thailand.

Noninstitutional sources

The classification in Table 1 of noninstitutional sources into professional moneylenders, traders and shopkeepers, landlords, and relatives, friends, and others is arbitrary insofar as many individuals could belong to more than one of the categories listed. In the rural surveys conducted in India, Pakistan, and Thailand, the classification, though not identical with the one adopted in Table 1, was according to the major occupation of the lender. The reports of these surveys confirm the general impression that in the unorganized money markets there are many persons other than professional moneylenders who lend money at interest. However, the extremely low proportion of credit reported as supplied by professional moneylenders in the Punjab is the result of special circumstances; after partition, the Hindu moneylenders fled to India and were replaced by local people not yet classified as moneylenders.

There are many reasons why noninstitutional sources should provide more credit than institutional sources. The most important is that the existing financial institutions tend to restrict their lending activities mainly to urban areas and do not generally wish to engage in the more risky field of lending to the agricultural sector. Also, those in the rural sector who wish to borrow money prefer to use noninstitutional sources of credit despite the fact that the interest rates are much higher than rates on loans from institutions. This preference is due to a number of factors. The institutions are usually at a considerable distance from the borrowers, while moneylenders are available in every village. Borrowers obtain their loans more promptly from noninstitutional sources. Noninstitutional sources do not insist on punctual repayment as banks or cooperative societies do. Usually it is possible to obtain loans for such purposes as marriage and litigation only from noninstitutional sources. There is no publicity on the amount of money borrowed from noninstitutional lenders. There are generally no intricate and complicated rules governing the granting of loans by the village moneylenders. And noninstitutional sources are willing to lend money more freely without collateral and on the borrower's mere promise to repay. The absence of a collateral requirement is especially important, since the majority of the potential borrowers in the unorganized money market have very little in the way of financial or physical assets.

SUPPLY OF INSTITUTIONAL CREDIT

Cooperative societies—one of the major sources of institutional credit—were established in many countries in Asia and in certain colonial territories much earlier than in Latin America or the Middle East; accordingly, in these territories, they are generally much more important than other sources of institutional credit. In Latin America and in some of the Middle Eastern countries, a considerable volume of agricultural credit has been supplied by governments, either directly or through special credit institutions wholly or partly government owned.

Commercial banks have been an important source of agricultural credit in a number of Latin American countries, partly because of the nature of banking development in that region and partly because selective credit controls have been used by many central banks to redirect the flow of credit toward the agricultural sector. In Asia and the Middle East, commercial banks have generally supplied very little, if any, credit to agriculture.

Cooperatives. Cooperative credit societies may generally be regarded as belonging to the unorganized sector because most of them operate in rural areas for financing agriculture. In Pakistan, however, many cooperative credit societies in recent years have begun to perform commercial banking functions[7] and therefore partly belong to the organized money market. Consumer credit societies are of little or no significance in most underdeveloped countries and even when they are found in urban areas may be rightly classified as part of the unorganized money market.

Both the limited and the unlimited liability type of cooperative credit society are common in underdeveloped countries. The primary cooperative credit societies usually combine to form central cooperative banks, and these in turn combine to form an apex cooperative bank. The apex institution performs basically the function of a bankers' bank to the cooperative movement as a whole, obtaining funds mainly from the government and partly from the movement itself.

Even in countries where they have been successfully introduced, cooperatives have had a number of shortcomings. The supply of credit made available by them has usually been inadequate, especially in relation to medium-term and long-term needs. Thus, for example, in Ceylon where the cooperative movement supplied 7 per cent of total rural credit in 1951, the annual report on cooperative societies for 1954 stated that "after 43 years of activity the Ceylon Movement can be said to have touched the bare fringe of the whole problem. . . . Our

[7] The practice began with the partition of India when most of the commercial banks in Pakistan which were owned and operated by Indians left the country.

Credit Societies are making much headway over short-term loans, but adequate facilities for medium- and long-term loans are a crying need. . . ."[8] In other countries, such as Thailand and the colonial territories in the Caribbean, dissatisfaction has often been expressed that the cooperative movement, though useful as a means for channeling government funds to the agricultural sector, has not been of importance in the mobilization of domestic capital.

It is characteristic of the cooperative movement in most underdeveloped countries that cooperative societies tend to flourish when agriculture is booming and the terms of trade for agriculture are good. But whenever agricultural incomes fall, the movement suffers a setback, and more often than not the gains achieved in the good years are wiped out. The great depression beginning in 1929 dealt a severe blow to the cooperative movement, which had already been faltering under the weight of deteriorating terms of trade for agricultural products in the twenties. The movement received government financial help before the war; and in postwar years it was stimulated by the generally favorable terms of trade for agriculture. With the prospect of considerable government assistance in the future, as in India, the movement may be able to weather future depressions.

Another characteristic is that, even in the most favorable periods and in the most successful countries, the cooperative movement has been an important source only for financing crop loans, that is, for short-term credit. Medium-term and long-term finance have been exceptions. In a few areas in India, some long-term finance has been supplied by cooperative mortgage banks. Some of the terms and conditions of loans granted by cooperative societies are tabulated in Table 10.

The cooperative movement has been more or less firmly established in Asia. It began as early as 1904 in India, Pakistan, and Burma; in 1912 in Ceylon; and in 1916 in Thailand. In Indonesia and the Philippines, it was established much later and is generally less important there than in other Asian countries. In Indonesia, cooperative societies are not important because of the larger role played by the government-operated pawnshops and the village banks. In the Philippines, defects in the system of land tenure were grave obstacles to the development of agricultural credit in general and to the establishment of the cooperative movement in particular.

In Japan, the cooperative movement has provided adequate finance for agriculture; and the system of discounting agricultural bills with the societies, which in turn rediscount them with the Central Coopera-

[8] Cooperative Department, *Administration Report on the Working of Cooperative Societies for 1954* (Colombo, 1955), p. 1.

tive Bank for Agriculture and Forestry, has created a close link between the organized and unorganized money markets. But even in Japan the cooperative movement has supplied adequate credit only for the short-term needs of agriculture. While medium-term and long-term loans are becoming increasingly available through cooperative associations, they are still not adequate.

In British colonial territories, the degree of success of the cooperative movement has varied widely. In 1951, 84 per cent of the families in Cyprus had membership in the cooperative movement; in British Honduras the percentage was 36, in Fiji 22, in Mauritius 15, in Trinidad and Tobago 15, and in the Federation of Malaya 14. In most of the other territories, the percentage is much smaller than 5; for example, in Sierra Leone only 1 per cent of the families had access to any cooperative society.[9]

The cooperative movement in Cyprus is probably the most successful among underdeveloped countries. The movement was introduced in 1914; it had a slow start and the societies were at first regarded as merely lending and collecting agents of the Agricultural Bank (founded in 1925). The movement was reorganized in 1935 as a Raiffeisen thrift and credit type of society with unlimited liability and a Cooperative Central Bank was founded in 1937. Since then, the number of societies and membership have grown so rapidly that practically every farmer is a member of a cooperative society.

In several countries in Latin America and the Middle East, there is still no cooperative movement; where it does exist in these regions it is generally of recent origin. In Mexico, the cooperative agricultural credit system was established as early as 1926, an exception to the rule, but was not successful except in certain cases, such as the societies established by the cotton farmers. A small farmer who did produce a profitable cash crop such as cotton or sugar cane had difficulty in repaying his debts, and there was also a general lack of cooperative spirit. The cooperative movement in Bolivia and Guatemala was begun only after the end of World War II. In Cuba, experiments in cooperative credit are being made with the formation of rural credit associations affiliated with the Bank for Agricultural and Industrial Development.

In Jordan, the law establishing and controlling cooperative societies was passed only in 1952, while in Iraq the law regulating the movement was passed in 1944. In Lebanon, the only agricultural cooperative society that is in operation was established in 1936. The late establish-

[9] See Marjorie Nicholson, *Cooperation in the Colonies* (Loughborough, England, 1953). Derived by taking membership in all societies as a percentage of total number of families estimated on the basis of four persons per family.

ment and slow growth of the cooperative movement in the Middle East has been attributed by some writers to the influence of the Moslem law which prohibits the levying of interest charges. This is probably an important factor in Jordan and in certain parts of Indonesia (in West Java and Northern Sumatra), but in other Moslem countries it may not have been a hindrance.

An exception to the rule of recent establishment of cooperatives in Middle Eastern countries is Egypt, where cooperative societies were established as early as 1907. They were failures in those early days, however, because of lack of government support and absence of any legislation to guide and organize the movement, the comparative novelty of cooperative theory and practice, and absence of higher authority within the movement to finance and supervise it. In recent years, however, the movement has expanded in Egypt, and its membership now covers about one fifth of the rural population.

Government institutions. The supply of credit by government, either directly or through agricultural credit institutions owned wholly or partly by it, had some importance before World War II, mainly in Latin American countries and in certain independent underdeveloped countries in the Middle East. Even in the twenties, there was some government supply of credit in a number of Latin American countries, and this received a stimulus when the great depression dried up the usual sources of agricultural credit. At present, nearly every Latin American country has some credit institution for financing agriculture with funds derived from the government. In Asian countries and in certain parts of Africa, agricultural credit institutions of this kind have been established generally only in postwar years.

Among the Middle Eastern countries, the Agricultural Bank of Turkey was established in 1863 and reorganized as a government-owned institution in 1937. As with most agricultural credit banks depending on funds from the government, it supplies both short-term and long-term credit. The share of long-term credit, which had been almost negligible, has recently been increasing; short-term loans declined from 96 per cent of total credit supplied by the Agricultural Bank of Turkey in 1948 to 77 per cent in 1953. The amount of loans repaid when due increased from 50 per cent in 1948 to 84 per cent in 1952.

Government-owned credit institutions obtain funds not only from the government budget but in many cases from the central bank as well. In Turkey, the Agricultural Bank in 1952 rediscounted with the Central Bank LT 340 million, compared with its total loans of LT 1,000 million.

Except in Latin America, the amount of credit granted by these institutions is generally small when compared with either noninstitu-

tional sources of credit or other institutional sources. These government-owned or government-controlled institutions have made loans directly to the farmers and/or through cooperative credit societies and other financial intermediaries. Where cooperatives have not been developed, as in Latin America, most of the loans are granted directly to the farmer. For example, in Chile out of a total of Chil$2,621 million advanced in 1951 by the Agricultural Credit Fund, less than Chil$1 million was lent through small farmer cooperatives. Similar situations are known to exist in Cuba, the Dominican Republic, Ecuador, Haiti, Honduras, and Panama, and in Iraq and Lebanon.[10]

In Asia, governments have been a source of finance for the cooperative movement; generally, they have channeled most of their loans to agriculturists through cooperative societies or similar associations. There are important exceptions, e.g., Burma, where direct loans from the Government have been much more important than loans granted through cooperative societies.

Even where they are important, government-owned or government-operated credit institutions have usually financed the larger farmers and neglected the small farmer despite the latter's greater need for finance. In the Agricultural Bank of Peru, a certain proportion of capital is reserved for loans to small farmers, but the proportion is only 20 per cent.

Another factor to note in regard to both government-owned credit institutions and other sources of institutional credit in the unorganized money market is that the principles of supervised credit and the provision of expert guidance and advice to the farmer are virtually lacking in most underdeveloped countries. In a few Latin American countries, such as Costa Rica, El Salvador, and Paraguay, however, supervised credit is available and used successfully to ensure that the farmer will be able to repay loans when due.

Although the granting of both short-term and long-term loans by these credit institutions is legally allowed (see Table 10), they generally grant credit mainly for short or medium terms. Although the law of the Agricultural Bank of Iraq allows loans of ten years' duration, no loan granted between 1946 and 1951 was for more than five years. The value of the short-term loans granted by the Syrian Agricultural Bank has been much greater than that of long-term loans. There have been exceptions, e.g., the Uganda Credit and Savings Bank, where long-term loans have been larger. The importance of adequate long-term finance hardly needs emphasis, since long-term credit is required for permanent improvements to increase the productivity of agriculture.

[10] See United Nations, *Progress in Land Reform* (New York, 1954), p. 222.

Link Between Unorganized and Organized Money Markets

The general belief is that there is little connection between the unorganized and the organized money markets in underdeveloped countries. It is, however, quite uncertain whether the connection is so slight as to be negligible. Some of the missing statistics which would be helpful in determining the exact degree of connection are the volume of loans granted by lenders in the organized money markets to borrowers from the unorganized markets and the amount of relending which borrowers from the organized markets carry out in the unorganized markets.

The extent to which commercial banks operating in the organized money markets have financed directly or indirectly the agricultural sector of the economy is one indication of the closeness of the connection between the two markets. Table 9, which compares commercial bank loans, advances, and discounts to the agricultural sector with their total loans, advances, and discounts, shows that the larger the credit extended by commercial banks to agriculture, the closer the link between the two money markets. This criterion may be subject to distortion, however—for example, when the commercial banks lend a large part of their agricultural loans to estate agriculture or to large landlords who might be classified as belonging to the organized money market. But even in such cases it can be argued that the link between the two markets is becoming closer, because when large landowners obtain easier and larger credit from the commercial banks, they in turn will be willing to lend more to the small moneylenders and small agriculturists in the unorganized money markets. A common practice in underdeveloped countries is for large landlords to make short-term advances to their tenants or to small land-owning peasants.

Commercial bank loans to agriculture are less than 10 per cent of the banks' total loans in most underdeveloped countries, except in some Latin American countries, such as Colombia, Cuba, Peru, and Paraguay, and in Indonesia and the Philippines. Thus, according to this criterion, the link between the two money markets is rather slight.

Another way of determining the degree of connection between the organized and unorganized money markets is to measure the relative importance of institutional credit in the unorganized money market, i.e., the relative importance of credit supplied to that market by such institutions as commercial banks, cooperative credit societies, land mortgage banks, private agricultural banks, and agricultural credit institutions financed by the government.[11] These institutions, except the

[11] It is open to question whether government-owned institutions (and also government lending) can be included in this category, especially since they are not

commercial banks, lend money mainly in the unorganized money market, but a significant portion of their working capital (subscribed capital, deposits, and borrowings) is derived from the organized money market.[12] To show the relative importance of institutional credit in the unorganized money market, and thus of the link between the organized and unorganized money markets, the outstanding agricultural loans of such institutions have been compared (see Table 9) with national income originating in the agricultural sector and with the currency in circulation. From these comparisons, it would seem that, according to this criterion, the link is negligible in most underdeveloped countries, except a few Latin American countries, such as Costa Rica, the Dominican Republic, El Salvador, Mexico, and Nicaragua.

In addition to these quantitative indicators, there is some scattered information on the amount of finance which moneylenders obtain from commercial banks and on the extent of credit which traders in agricultural commodities give to agriculturists. Commercial bank lending to moneylenders does not seem to be important, except in Southeast Asia in prewar years. The foreign moneylenders, mainly the Chettiars of India, obtained a substantial portion of their working capital in the decades prior to the great depression by borrowing from local branches of the foreign exchange banks and of the Imperial Bank of India.[13]

A report to the Ceylon Banking Commission in 1934 states that the exchange banks in Ceylon used to make large advances to the Chettiars in Ceylon, totaling about Rs 20 million a year, and that the Imperial Bank of India advanced an additional Rs 20 million each year before the depression. Since the total assets (mostly loans) of the Chettiars in Ceylon before the depression were about Rs 150 million, they obtained about one third of their working capital from commercial bank sources. Since the Chettiars were an important source of credit in the unorganized money market in Ceylon, the two markets were very closely linked. In Burma also, the Chettiars obtained from the foreign exchange banks and from the Imperial Bank of India advances amounting to about 10 per cent of their loans to agriculturists.[14] Similar situations existed in Malaya, Indo-China, and Thailand.

The great depression drastically reduced the amount of loans which the commercial banks were willing to extend to the Chettiars, and also

---

dependent on the organized money market for funds. But insofar as governments borrow money in the organized money market, it may be argued that there is an indirect link.

[12] It is not implied here that these institutions are subject to credit control by central banks.

[13] In India, moneylenders as a whole obtained practically no finance from the commercial banks and there was no link as in Southeast Asia between the two money markets.

[14] U Tun Wai, *Burma's Currency and Credit* (Calcutta, 1953), p. 45.

reduced Chettiar lending to the agriculturists. With the depression, the agriculturist could not afford to pay interest or amortization on the loans. The Chettiars foreclosed on the security of the loan and became owners of agricultural land and houses. The Chettiars in turn could not honor their debts to the commercial banks immediately. Thus the close connection between the two markets in Southeast Asia afforded by moneylenders borrowing from commercial banks was disrupted by the depression; and it has not been in evidence in postwar years.

The link between the two money markets afforded by exporters and traders in agricultural commodities borrowing from commercial banks and making advances to agriculturists, either directly or through smaller merchants, seems to be fairly common in underdeveloped countries with a large export sector. Exporters make advances to agriculturists in order to ensure an adequate supply of agricultural produce at favorable prices. In British West Africa, the large trading firms provide a considerable amount of finance to African produce buyers and retailers. For example, in 1948 the United Africa Company obtained 85 per cent of its cocoa, 76 per cent of its groundnuts, 15 per cent of its palm oil, and 28 per cent of its palm kernels by means of such advances to produce buyers.[15] In Peru, advance payments by cotton ginning plants and large cotton buyers and exporters are made to cultivators in order to ensure a regular supply of the crop at the time of harvest.

Where marketing boards have been established, these financial links are not severed, for the buying agents of these boards continue giving credit to the smaller traders who in turn give credit to the agriculturists. Thus, in Nigeria a substantial source of seasonal credit is available from these buying agents who have obtained much of their funds from the commercial banks. It is believed, however, that the small middlemen who receive loans from the buying agents frequently use the funds in other businesses before utilizing it for the purchase of the crop.[16]

In some underdeveloped countries, a link between the two markets is also provided by importers who extend credit to wholesalers who in turn extend credit to village retailers. Thus, for example, in Burma before the war a considerable amount of credit was granted by importers and dealers to finance the distribution of imported textiles, hardware, mill parts, etc. The credit system, however, was interrupted by the war and has not since been restored.[17]

[15] See W. T. Newlyn and D. C. Rowan, *Money and Banking in British Colonial Africa* (Oxford, 1954), pp. 138–39, and United Africa Company Limited, *Statistical and Economic Review* (London), September 1949, p. 51.

[16] See International Bank for Reconstruction and Development, *The Economic Development of Nigeria* (Baltimore, 1955), p. 163.

[17] See U Tun Wai, *Burma's Currency and Credit* (Calcutta, 1953), pp. 93–94.

So far this discussion has dealt mainly with the extent to which the volume of credit in the unorganized money market is affected by operations in the organized market. Some attention should be paid, however, to the significance of the relation between the two markets for the general direction of monetary policy. The link between the markets is much more effective in countries where it is provided mainly through commercial banks granting credit to agriculture, either directly or through cooperative societies and special agricultural credit institutions, than in countries where it is provided either by exporters of agricultural commodities making loans to agriculturists or by importers financing the distribution of imports. In most underdeveloped countries, except a few in Latin America, the general situation is that commercial bank loans to agriculture are not so important as the financial assistance that percolates down through the large dealers to the agriculturists. As a rule, the proportion of credit made available in the unorganized market that is in fact supplied by the organized market is larger than is generally supposed; but, except in a few countries, the unorganized market is not much affected by changes in credit conditions in the organized market.

Japan is almost the only country that has developed an effective close link between the two money markets. This has been achieved mainly through the agricultural bill system which has been incorporated into the cooperative movement. In order to raise funds, agriculturists and cooperative associations draw promissory notes or "agricultural bills." These bills are discounted and rediscounted by the cooperative associations, the credit federations, and the Central Cooperative Bank for Agriculture and Forestry, which borrows funds from the Bank of Japan whenever necessary.

In Cyprus, the Cooperative Central Bank had overdraft arrangements with Barclays Bank (Dominion, Colonial, and Overseas) as far back as 1938; the overdraft has been fairly substantial in relation to the size of the cooperative movement. In Mauritius, the Cooperative Bank and the Cooperative Wholesale Society have been financed mainly by Barclays Bank. In most parts of British Africa, loans are granted by the British banks to cooperative societies with government guarantees, but their amount is generally small. In the Middle East, judging by the situation in Jordan and Lebanon, and in Asia, cooperative societies have borrowed very little from the commercial banks.

Although agricultural credit institutions have generally not obtained much finance from commercial banks, there have been important exceptions, e.g., Dawsons Bank in Burma, which before the war had overdraft facilities with the commercial banks for financing seasonal crop loans. The Land and Agricultural Bank of Southern Rhodesia

has obtained considerable financial assistance from Barclays Bank; in 1952 it obtained an overdraft of almost £1,000,000, which constituted about 25 per cent of its seasonal advances and 11 per cent of its total advances.

A good qualitative link is established when the central bank supplies credit to the agricultural sector either directly or through special credit institutions. This type of link has been important in many Latin American countries and is becoming important in Middle Eastern and Asian countries. In Honduras, the central bank may absorb up to 40 per cent of the mortgage certificates and bonds issued by the Development Banks for medium-term and long-term financing. In Iraq, the central bank has given large sums of credit to the Agricultural Bank; in 1951–52, such credit amounted to 53 per cent of the Agricultural Bank's loans to agriculture, and in 1952–53 to 25 per cent. In the Philippines, the central bank gives financial assistance to the newly established rural banks.

The main advantage of this type of link is that the central bank can influence more directly the cost and availability of credit in the unorganized money market; the main disadvantage is that the central bank is likely to be under political pressure not to restrict credit in the unorganized money market even when an over-all credit restriction is warranted.

Level and Structure of Interest Rates

Level of interest rates

It is difficult to determine precisely the weighted average rates of interest which prevail in the unorganized money markets of underdeveloped countries, for even where data are available, the rates quoted cannot always be taken at face value. This applies both to rates charged by moneylenders and to rates charged by the credit institutions.

Moneylenders' rates in different countries cannot be easily compared, because, to begin with, the intensity of their sharp practices varies between regions and countries. Some of the common practices which increase effective rates include deducting the interest charge at the time the loan is made, charging interest on the original amount lent rather than on the unpaid balance, not keeping proper books or giving receipts so that the borrower can be made to pay more than agreed, demanding additional services for the favor of giving a loan, and lending in money against the security of standing crops, but demanding repayment in kind and undervaluing the commodity used.

The last named malpractice seems to be common in many underdeveloped countries; it is known as *shayl* lending in Northern Sudan and *sabape* in Burma. The essence of the practice is the extraction of an exorbitant rate of interest by having the commodity in which a loan is repaid valued at a price much lower than that which is likely to prevail at harvest time. The lender thus reaps the benefit not only of the usual high rate of interest but also of the difference between the two prices. Where loans are granted in kind, i.e., fertilizers, seed, ploughs, etc., additional benefit may be derived by the moneylender overpricing the articles supplied. Variations of this type of lending are also to be found in credit sales by a village storekeeper who obtains hidden interest by overpricing the goods sold and underpricing the repayment in kind. In Indonesia, the malpractices arising from lending in money and demanding repayment in kind are common in the fishing industry; before the war they were responsible for effective rates of interest ranging from 50 per cent to 500 per cent per annum.

Of course, not all the interest charges which the moneylender levies accrue as net income to him. First, there are a number of payments and services for which he is responsible; in many countries he has to pay the taxes which are due on the crops. He may also supervise and advise the cultivator during the crop season. On loans against agricultural commodities, he sometimes has to pay for storage and transportation.

Another difficulty in determining the level of interest rates charged by a moneylender stems from the unorganized nature of the market, which allows rates to vary considerably between different parts of the country. The extent of the variation may be seen from the data for Ceylon, Thailand, and India given in Tables 2, 3, and 4. The regional

TABLE 2. REGIONAL VARIATIONS IN INTEREST RATES CHARGED BY REGISTERED PAWNBROKERS AND MONEYLENDERS IN CEYLON, 1951

(*In per cent per annum*)[1]

Provinces	Pawnbrokers' Rates	Moneylenders' Rates
Western	17.9	19.7
Central	23.9	17.3
Southern	19.8	13.2
Northern	37.5	26.8
Eastern	30.4	12.3
Northwestern	19.4	10.6
North Central	45.8	36.4
Uva	22.3	14.5
Sabaragamuwa	19.3	20.8
Weighted average rate	22.9	18.5
Weighted average rate of pawnbrokers and moneylenders	20.2	

Source: Department of Census and Statistics, *Census of Financial Institutions, 1952* (Colombo, 1954).

[1] Interest earned during the year expressed as percentage of advances outstanding at the end of the year.

TABLE 3. STRUCTURE OF INTEREST RATES IN THE UNORGANIZED MONEY MARKET IN THAILAND, BY REGIONS AND SOURCES OF SUPPLY, FISCAL YEAR 1952–53

(*In per cent per annum*)

Source of Funds	Entire Country	Central Plain[1]	Southeast	Northeast	North	West and Southwest[2]	South
Cooperative societies	8.54	9.25	8.00	7.87	8.67	n.a.[3]	8.05
Unspecified (others)	17.91	22.76	n.a.[3]	n.a.[3]	5.00	5.00	n.a.[3]
Relatives	18.29	19.46	7.25	22.09	7.25	0.14	7.18
Merchants or buyers	25.64	20.62	n.a.[3]	56.27	15.00	2.00	18.25
Village shopkeepers	28.24	21.52	18.00	64.22	31.60	17.14	25.07
Moneylenders	30.90	32.52	28.00	22.08	24.00	44.00	18.24
Landlords	44.70	35.79	n.a.[3]	91.88	5.00	n.a.[3]	5.00
Weighted average[4]	21.13	22.15	11.20	17.26	17.74	3.61	11.33

Source: Ministry of Agriculture, *Thailand Economic Farm Survey, 1953* (Bangkok, 1953).
[1] Predominantly rice-growing areas.
[2] Mining and timber areas.
[3] Not applicable because no loans were taken.
[4] Based on the percentage of borrowers and the average size of loan from each source.

variations are due partly to differences in demand conditions and partly to differences in the availability of supply. In Ceylon, the rates charged by the moneylenders tended to be lower in areas where credit institutions, such as cooperative societies, were well established (Table 2). In India, according to the All-India Rural Credit Survey, interest rates were highest in districts which could be classified as part of the subsistence sector; next came districts which had recently been monetized; and rates were lowest in districts which were both commercialized and monetized (Table 4). The availability of institutional credit also seems to have affected the level of interest rates, for in districts with low interest rates there were more offices of the Imperial Bank of India than in districts with high rates.

TABLE 4. VARIATIONS IN INTEREST RATES IN THE UNORGANIZED MONEY MARKET IN INDIA, ACCORDING TO TYPE OF REGION, FISCAL YEAR 1951–52

Level of Interest Rates[1]	Number of Districts		
	Subsistence	Monetized	Commercialized and monetized
Very high	10	5	0
High	9	4	2
Medium	7	5	3
Low	1	6	8
Very low	0	8	7

Source: Reserve Bank of India, *All-India Rural Credit Survey* (Bombay, 1954), Vol. 2, pp. 190–93.
[1] The level is determined by the proportion of borrowing (excluding borrowing at unspecified rates of interest) at rates of 18 per cent or more to the total borrowing from the principal private credit agencies. Very high level is where the proportion is 93.7 per cent, high is 77.0 per cent, medium is 54.3 per cent, low is 23.4 per cent, and very low is 3.9 per cent.

The difficulty of determining the true level of interest rates on loans granted by credit institutions and by governments stems from the manner in which such loans are disbursed. These interest rates are low, but loans are usually granted only after considerable delay[18] and at the administrative headquarters (in small towns) instead of in the villages. Consequently, the cultivator has to incur considerable expense for travel and accommodation to obtain a loan, not to mention occasional favors demanded by the loan-disbursing officials. The effective rate of interest even on government loans is thus higher than is usually supposed.

Another difficulty arises from the additional charges levied by some credit institutions. For example, the Agricultural Bank of Bolivia in 1952 charged not only the nominal 8 per cent per annum interest, but also the expenses of the initial trip of the bank's technicians, the trip of the guarantor to see the property, and other incidental expenses.

Other costs of borrowing from credit institutions arise from notarial or conveyance fees, stamp duties, and the cost of certifying copies of title documents. Where titles to land are doubtful because of the absence of a system of registration of title, as in Ceylon, the costs are much higher. It has been estimated that the cost of establishing a satisfactory title to land for borrowing from the Agricultural and Industrial Credit Corporation of Ceylon varies between 5 and 10 per cent for a loan of Rs 3,000.[19]

There may be still other special difficulties in attempting to measure effective interest rates precisely. The rates charged by the Indonesian village banks are fairly high because an element of compulsory savings is incorporated in the loan system. Of the 20 per cent which a borrower has to pay, only 8 per cent is the real interest charge, 12 per cent being compulsory savings. After a village bank has been well established, the 20 per cent charge is maintained, but the real charge is reduced to 4 per cent and the compulsory savings increased to 16 per cent.

Interest rates charged by credit institutions are generally low. Indeed, in most countries, the rates charged by cooperative societies and by government-owned and government-sponsored agricultural banks are lower than the rates charged by commercial banks for financing trade. The rates charged by moneylenders, on the other hand, are

[18] In India, about 30–40 per cent of the cultivators received government loans after a time lag of from one to three months, while in some districts about one fifth to one third of the loans were disbursed after a time lag of eight months or more. See Reserve Bank of India, *All-India Rural Credit Survey* (Bombay, 1954), Vol. 2, p. 205.

[19] H. S. F. Goonewardena, "Some Problems of Agricultural and Industrial Credit in Ceylon," Economic Commission for Asia and the Far East, *Mobilization of Domestic Capital: Report and Documents of the Second Working Party of Experts* (Bangkok, 1953), p. 195.

generally very high, as shown in Table 11. The figures in the table are meant to convey orders of magnitude rather than precise data, since the sources for many countries are not reliable. The rates shown have taken into account, as far as possible, the malpractices of the moneylenders. In compiling the table, certain arbitrary standards and subjective judgments have been used in classifying rates as lower exceptional, usual, occasional, or higher exceptional rates. The usual rate is that at which more than half of the total loans of moneylenders are granted, while the occasional rate refers to loans constituting from 10 to 20 per cent of the total. The lower and higher exceptional rates refer to loans constituting less than 5 per cent of the total loans granted.

The weighted average rate of interest charged by both institutional and noninstitutional sources in the unorganized money market depends upon the relative importance of the two sources and the average rates charged by each source. On the basis of the information in Tables 10 and 11, and in the light of all that has been said above regarding hidden interest charges, the average effective rate charged by credit institutions may be put at 12 per cent per annum, and the average effective rate charged by individuals at 36 per cent per annum. It is then a matter of arithmetic to derive the weighted average rate of interest in the unorganized money market from the relative importance of institutional and noninstitutional credit. In countries where institutional and noninstitutional credit are equally important, the weighted average rate will be 24 per cent per annum; in those where noninstitutional credit has greater importance, it will approach 36 per cent per annum. Since in most underdeveloped countries noninstitutional credit is more important than institutional credit, it may be concluded that the weighted average rate of interest in those countries is usually between 24 and 36 per cent per annum.

Structure of interest rates

It has already been noted that interest rates charged by noninstitutional sources vary from region to region and that the variation is due partly to differences in the accessibility of rural areas to an organized money market.

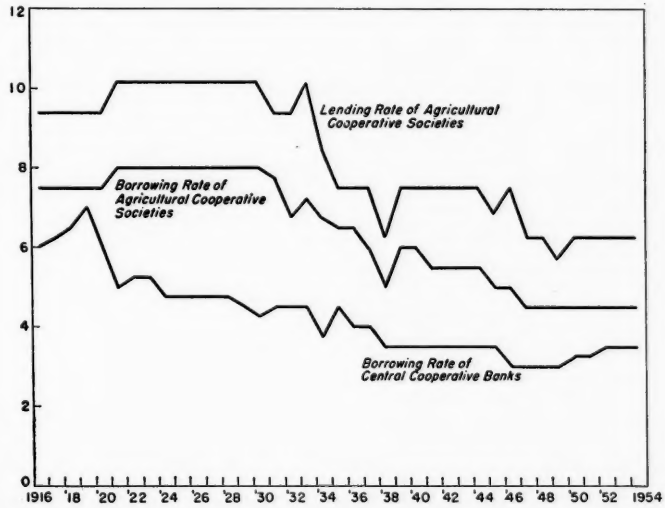
Within the cooperative movement, the structure of interest rates is more or less the same as the structure in the organized money market in one respect—namely, that rates are lowest at the source from which the supply of funds is drawn and highest at the point where funds become available to the final user. The rates charged by "apex" institutions to central cooperative banks are lower than those charged by the central cooperative banks to the primary cooperative societies;

and the highest rates are those charged by the cooperative societies to their members. This can be seen in both Table 10 and Chart 1. Central cooperative banks also generally charge a higher rate of interest on direct loans to agriculturists than on loans to primary cooperative societies. This is evidently an attempt to keep the rates charged by the primary cooperative societies in a competitive position vis-à-vis the rates charged by the central cooperative bank on loans to agriculturists.

The rates in unorganized money markets vary with the size of the loans, being generally lower as the loan gets larger. In Indonesia, the rate charged by the small loan banks in the rural sector on loans below the equivalent of US$2.20 was 4 per cent per month, while the rate on loans of US$8.77 and above was 1 per cent per month. In the Philippines also, the legal maximum permissible rate on loans in the rural areas was 2.5 per cent per month on loans up to the equivalent of US$50, while on loans from US$50 to $250 it was 2 per cent per

CHART 1. STRUCTURE AND TREND OF INTEREST RATES OF COOPERATIVE SOCIETIES IN MADRAS, INDIA, 1916–54

(*In per cent per annum*)


12
10
8
6
4
2
0
Lending Rate of Agricultural Cooperative Societies
Borrowing Rate of Agricultural Cooperative Societies
Borrowing Rate of Central Cooperative Banks
1916 '18 '20 '22 '24 '26 '28 '30 '32 '34 '36 '38 '40 '42 '44 '46 '48 '50 '52 1954

Sources: Reserve Bank of India, *Banking and Monetary Statistics of India* (Bombay, 1954), pp. 726–29, and *Statistical Statements Relating to the Cooperative Movement in India, 1952–53* and *1953–54* (Bombay, 1955).

month and on loans larger than US$250 it was 1.17 per cent per month.[20]

The structure of rates in the unorganized money markets in underdeveloped countries, however, differs from that of the organized money markets in both developed and underdeveloped countries insofar as the short-term rates charged by credit institutions seem to be higher than the long-term rates. In Thailand in 1952, the cooperative societies charged members 10 per cent per annum on short-term and medium-term loans, against 8 per cent per annum on long-term loans. In Cambodia, the cooperative provincial bureaus charged 12 per cent per annum on short-term loans up to 18 months but only 8 per cent on medium-term loans. This is the result partly of policy decisions (by the government-controlled credit institutions and cooperative societies) and partly of the fact that the collateral normally used for long-term loans is agricultural land, which is much superior to the collateral used for short-term loans, namely, promissory notes, stocks of agricultural commodities, cattle, etc.

The rates charged by moneylenders follow similar patterns. Thus, before World War II the Chettiars in Southeast Asia, especially in Burma and Ceylon, charged lower rates for long-term than for short-term loans. In Cambodia also, the rates charged by the moneylenders are higher on loans of short duration; and the rates on small loans have tended to be higher than on large loans.[21] The explanation of the higher rates on loans of short duration is in part the same as already suggested for the practice of credit institutions. The higher rates may also be due to the difficulty, often mentioned by moneylenders, of finding new borrowers and the possibility of having funds lie idle between repayments and new loans.

In Honduras, the structure of rates charged by credit institutions, at least for the short-term period of 18 months, is not the same as in other underdeveloped countries. The Central Bank has fixed maximum rates for crop loans from credit institutions to agriculture at 4 per cent per annum for loans of 6 months' duration, 5 per cent for 9 months, and 6 per cent for 18 months, plus an over-all 2 per cent for loans equivalent to less than US$5,000.

Generally speaking, interest rates in the unorganized money markets

[20] See "On the Establishment of Certain Small Loan Banks by Governments, with Special Reference to the Experience in Indonesia," Economic Commission for Asia and the Far East, *Economic Bulletin for Asia and the Far East* (Bangkok), November 1951, pp. 41–47, and Central Bank of the Philippines, *Annual Report, 1950* (Manila, 1951).

[21] Thonni Thoutch, "On the Possibilities of Agricultural Credit in Cambodia and on the Problems Which Cambodia Must Face in Order to Ensure Adequate Agricultural Financing," International Conference on Agricultural and Cooperative Credit, University of California, 1952, *Proceedings* (Berkeley, Calif., 1952), Vol. 2, p. 633.

have not been subjected to the same kind of seasonal and cyclical fluctuations as in the organized money markets. There should be no seasonal fluctuations, because most of the borrowing and lending is for the financing of production, all of which takes place at one season of the year with practically no lending at other times. Most agricultural loans are demanded and made available before the beginning of the agricultural season, and the quantity borrowed should cover all expenses until the crop is harvested.

There are, however, some agriculturists who are unable to obtain all their requirements at the beginning of the season because they do not have sufficient collateral or credit standing to borrow the full amount. They are forced to rely on loan sharks, pledging their crops a few weeks before harvest time. Since the interest charged on such loans is much higher than the usual rates, it may be argued that, for the market as a whole, there is a certain amount of seasonality in the rates of interest. This seasonality is not induced by an expansion in demand for loanable funds during the busy time of the year when the level of demand is at a peak, but occurs at a time when demand is rather small. It is caused mainly by the fact that the usual sources of supply have dried up and that the credit standing of people who borrow at this time is much below the average.

Cyclical fluctuations in interest rates are noticeable in the unorganized money markets but they arise in a different fashion and move in a different direction from those of the organized money markets. During the upswing of a business cycle, when prices of agricultural products are rising, land values also tend to rise. This has the effect of increasing the value of the collateral which agriculturists can offer to credit institutions and to reputable moneylenders. With rising agricultural incomes, some of the landless peasants become landowners. Insofar as there had been moneylenders and credit institutions with funds unutilized because suitable collateral was not available, the changed situation will have the effect of increasing the supply of loanable funds at the usual rate of interest. Since the interest rate on loans with land as collateral is lower than on loans without collateral, the weighted average rate of interest paid by agriculturists as a whole will tend to fall. It follows, therefore, that the effective rate of interest in the unorganized money market tends to fall in a boom period of rising agricultural prices and of land values, which is just the opposite of the cyclical changes in interest rates in the organized money market.[22]

[22] Fluctuations in interest rates also arise from the method of borrowing in kind and repaying in money and vice versa when prices of commodities have changed between the time of borrowing and repayment. Since both types of borrowing exist, it is not possible to generalize about the nature of such fluctuations.

In a period of falling agricultural prices, the value of land falls, which means a reduction in its importance as collateral. Furthermore, with foreclosures on loans which have not been repaid because of falling agricultural incomes, the ownership of land passes into the hands of moneylenders and credit institutions. The supply of credit at reasonable rates of interest dries up. Moneylenders who have lent on promissory notes or verbal promises to pay cannot and do not foreclose on the loans and thus the supply of credit at exorbitant rates of interest does not dry up in the same way. The effect of all this is to increase the weighted average rate of interest in the unorganized money market in a depression.

The experience of Burma and Ceylon during the years before and after the great depression illustrates these cyclical changes in interest rates. Chettiar lending in both countries against land as collateral had expanded rapidly during the boom period, but in the depression the Chettiars foreclosed on loans and became owners of land. In other countries, there were similar changes; the supply of institutional credit, at more or less constant interest rates, fell sharply in depression years, while it is doubtful if loans by moneylenders at exorbitant rates fell at all. In Indonesia, the number and value of pawns accepted by state pawnshops declined from 56 million pawns valued at f. 207 million in 1929 to 27 million pawns valued at f. 78 million in 1933. In Egypt, the value of mortgage loans extended by mortgage banks and mortgage companies fell sharply during the depression from the 1930 level of LE 29 million, and even by 1940 had recovered to only LE 19 million.

The weighted average rate of interest also tends to rise whenever there is a crop failure which forces agriculturists to fall back on the less reputable moneylenders. The rise is softened to the extent to which government and private relief funds are made available. Government measures of remission of land revenue, etc., are common in most underdeveloped countries. An example of an unusual type of private relief is to be found in Afghanistan, where no interest rates are charged on "Hassana" loans granted to those suffering from sudden calamities. Although security is demanded on these loans, the loan period is indefinite.

The long-term trend of interest rates in the unorganized money market would be expected to be downward; but so far there does not seem to have been much change in the rates charged by moneylenders except in isolated areas or in a few instances. Rates of credit institutions have, generally, declined in most countries. In India, the whole structure of rates of the cooperative movement has been much lower in recent years than in the early decades of the twentieth century (Chart 1). The policy adopted by governments to provide cheap credit to agri-

culturists, especially on credit supplied by government-controlled credit institutions, is in part responsible for this movement. The rate of interest charged by the Land and Agricultural Bank of Kenya when it began operations in 1931 was 6½ per cent, but in recent years it has been reduced to 4½ per cent. In Egypt, the rate charged by the Agricultural Credit Bank of Egypt to individuals, which had been 7 per cent per annum, has been lowered since World War II to 4 per cent.

Causes of High Interest Rates

Many explanations have been offered for the high interest rates that generally prevail in unorganized money markets. One theory is that interest rates are high there because they are determined by custom and have always been high. This might be called the theory of the customary rate of interest. It has been put forward by many writers; for example, W.T. Newlyn and D.C. Rowan, discussing interest rates in British Colonial Africa, conclude that "in the type of economy we are considering, interest rates are likely to be determined mainly by law or convention and to respond very little to changes in the local demand and supply for loanable funds."[23] These writers believe that such considerations are important for all economies in which loans are contracted by private bargains between two individuals rather than through the market.

There is probably some truth in this theory—at least as a short-run explanation of high rates of interest. In Israel, for example, soon after the British mandate was established after World War I, it was customary to charge £14 as interest for every £10 that a landless Arab peasant borrowed from a moneylender. This custom became so fixed that the common term for interest was *assara arbatash* (ten to fourteen).[24] There can be no question, however, that in the long run, when economic and social conditions in underdeveloped countries change, the rate of interest will change.[25]

The theory of customary rates is not satisfactory, however, because it does not explain how or why the custom of high rates developed. The true explanation has to be found in the economic and social conditions of underdeveloped countries, which cause the demand for loanable

[23] See W. T. Newlyn and D. C. Rowan, *op. cit.*, pp. 160–61.

[24] See Yehuda Lowe, "Agricultural Credit in Israel," International Conference on Agricultural and Cooperative Credit, University of California, 1952, *Proceedings* (Berkeley, Calif., 1952), Vol. 2, p. 803.

[25] It is possible, of course, that conditions in underdeveloped countries may change so slowly that rates of interest remain unchanged for many decades, and thus the duration of the short run is extended into a long-run period.

funds to be large in relation to the available supply. Some writers tend to explain the high rates of interest in terms of demand factors while others emphasize supply.

The demand for funds, in relation to the supply, is large because the average borrower in the unorganized money market has a very low income and therefore has no surplus funds to finance his business operations. The majority of the cultivating tenants—one of the most important groups of potential borrowers—have to borrow money not only for investment in land, cattle, etc., and for working capital to make purchases of seeds and fertilizers, but also for their minimum basic necessities of food, shelter, and clothing.

On the supply side, there is a general shortage of capital in underdeveloped countries and an inadequate level of domestic savings. Also, the small amount of domestic savings is not channeled effectively into the unorganized money market because of the absence of proper financial and credit institutions which not only would integrate the organized and unorganized money markets but also would facilitate the mobilization of savings in the rural areas.

Both demand and supply factors are mentioned in the *Final Report on the Economic Survey of Rural Ceylon* as being responsible for high rates of interest. According to this report, "The high rates of interest . . . are not wholly due, as sometimes supposed, to the inhumanity of the moneylender. Scarcity of capital even if the moneylenders were benevolent must necessarily raise interest rates. The moneylender's rate includes returns for the risk he takes by lending against pronotes [promissory notes], mere promises or doubtful securities. When he is satisfied about the integrity of the borrower and the security offered, the rate he charges is sometimes even less than that of the cooperative societies. But this is not to say that the moneylender does not take advantage of the weak position of the borrower or the inelastic character of the demand for the loans, when they are raised owing to sickness or under great difficulties. Scarcity of capital and inadequate security enable him to exploit the situation."[26]

The difference in the levels of interest rates between the organized and unorganized money markets stems partly from the basic differences between the sources of supply of funds in the two markets. In an organized money market, facilities for the expansion of credit are open to the commercial banks, which have the use of funds belonging to depositors. These banks are therefore able to charge relatively low rates of interest and yet make satisfactory profits for the shareholders. On the other hand, moneylenders in an unorganized money market have

[26] Department of Census and Statistics, *Final Report on the Economic Survey of Rural Ceylon, 1950–51* (Colombo, 1954), pp. 46–47.

little influence on the supply of funds at their disposal and, furthermore, their supply price tends to be influenced by the alternative uses to which their funds can be put.

A number of institutional factors are also responsible for high rates of interest in unorganized money markets. The size of the loan is usually small and thus the fixed handling charges are relatively high. Defaults also tend to be larger in unorganized money markets.[27] These higher defaults are due not so much to a lower standard of morality and willingness to repay debts as to the fluctuations in prices and incomes derived from agricultural products, which reduce the ability of the agriculturists to repay debts at inopportune times. Thus, in referring to moneylending in the Middle East and Asia, the summary report of the International Conference on Agricultural and Cooperative Credit states that "the exorbitant rates of interest charged by the village moneylenders are explained, if not justified, by the high risks and high costs involved in supplying credit in small amounts."[28] A UN report mentions that "high rates of interest are at the same time a symptom and a cause of risks in investments."[29]

Another general factor causing high rates of interest is experience in regard to inflation. While this is probably of importance in many Latin American countries, it hardly seems relevant for prewar colonial territories which, by their rigid currency exchange standards, had maintained fairly stable conditions but still had high interest rates in the unorganized money markets. The large development programs in most underdeveloped countries, however, constitute possible inflationary pressures and may be considered as a factor in maintaining high rates of interest.

The list of causes of high interest rates could be extended to include other social and economic factors in underdeveloped countries—even to fairly remote factors, such as the system of land tenure which prevents land from being used as collateral. A general statement, however, is that interest rates in the unorganized money markets of underdeveloped countries are high because the economy is underdeveloped and the money market unorganized.

While both demand and supply factors have to be taken into account in explaining the high level of interest rates, some indication of which

[27] This does not necessarily mean that defaults in unorganized money markets are so numerous as to justify the high level of rates. In fact, the opposite view is propounded below.

[28] International Conference on Agricultural and Cooperative Credit, University of California, 1952, *Farm Credit in Underdeveloped Areas: A Summary Report of the Conference* (Berkeley, Calif., 1953), p. 69.

[29] United Nations, *Domestic Financing of Economic Development* (New York, 1950), p. 9.

is the more important is desirable. In order to arrive at some conclusions, two hypothetical tables have been compiled, one focusing attention on some aspects of demand and the other on one aspect of supply.

In Table 5, interest rates are viewed from the supply side with reference to the influence of defaults on the rates which the lender would like to charge. In compiling the table, it has been assumed that (1) the lender does not recover any money from the defaulters; (2) the lender tries to recover not only the principal of the loans granted but also the interest which he would have earned on such loans (by charging higher rates of interest so that the return from the nondefaulters is sufficient to cover the loss of principal and interest from the defaulters); and (3) the rate of interest charged does not influence the volume or value of the defaults.[30] The table is presented in the form of a matrix with two variables, the value of defaults as a percentage

TABLE 5. ESTIMATES OF INTEREST RATES THAT LENDERS WOULD HAVE TO CHARGE TO COMPENSATE FOR DEFAULTS[1]

(*In per cent per annum*)

Value of Defaults as Percentage of Total Loans	Normal Interest Rate in Absence of Defaults						
	1	2	5	10	15	25	50
1	2.02	3.03	6.06	11.11	16.16	26.26	51.52
2	3.06	4.08	7.14	12.24	17.35	27.55	53.06
5	6.32	7.37	10.53	15.79	21.05	31.58	57.89
10	12.22	13.33	16.67	22.22	27.78	38.89	66.67
15	18.82	20.00	23.52	29.41	35.29	47.06	76.47
25	34.67	36.00	40.00	46.67	53.33	66.67	100.00
50	102.00	104.00	110.00	120.00	130.00	150.00	200.00

[1] For description of table, see text.

of total loans granted and the normal interest rate which the moneylender would like to charge in the absence of any defaults. For example, if the normal rate of interest is 15 per cent per annum, a rate of default of 5 per cent would raise the supply price (or rate) to 21.05 per cent per annum under the assumptions mentioned above.

The demand table (Table 6) has been compiled to show the rates of interest which "foolish" borrowers in the unorganized money market are willing to pay if they take no account of interest earned on their own capital and consider only the necessity of obtaining borrowed capital to finance their total agricultural operations. This viewpoint may seem rather unorthodox and unrealistic to those unaware of the

[30] If the rate of interest influenced the volume or value of defaults to any great extent, the system would be very unstable inasmuch as lenders would try to charge higher rates in order to cover defaults and this higher rate would tend to make the defaults larger, and so on.

TABLE 6. ESTIMATES OF MAXIMUM RATES OF INTEREST THAT BORROWER MAY BE WILLING TO PAY[1]

(In per cent per annum)

Borrowed Money as Percentage of Total Capital or Outlay	Productivity of Capital (Total Outlay) in Per Cent Per Annum														
	100	90	80	70	60	50	40	30	20	10	5	3	1
100	100	90	80	70	60	50	40	30	20	10	5	3	1
90	111	100	89	78	67	56	44	33	22	11.1	5.6	3.3	1.1
80	125	113	100	88	75	63	50	38	25	12.5	6.3	3.8	1.3
70	143	129	114	100	86	71	57	43	29	14.3	7.1	4.3	1.4
60	167	150	133	117	100	83	67	50	33	16.7	8.3	5	1.7
50	200	180	160	140	120	100	80	60	40	20	10	6	2
40	250	225	200	175	150	125	100	75	50	25	12.5	7.5	2.5
30	333	300	267	233	200	167	133	100	67	33.3	16.7	10	3.3
20	500	450	400	350	300	250	200	150	100	50	25	15	5
10	1,000	900	800	700	600	500	400	300	200	100	50	30	10
5	2,000	1,800	1,600	1,400	1,200	1,000	800	600	400	200	100	60	20
3	3,333	3,000	2,667	2,333	2,000	1,667	1,333	1,000	667	333	167	100	33
1	10,000	9,000	8,000	7,000	6,000	5,000	4,000	3,000	2,000	1,000	500	300	100

[1] For description of table, see text.

economic and social conditions prevailing in unorganized money markets in underdeveloped countries. The literature on the subject and knowledge of underdeveloped countries, however, justify the belief that many agriculturists do behave in this "foolish" fashion. Their attitude may be rationalized on the ground that without funds to purchase seeds, fertilizers, etc., the agriculturist would not be able to cultivate his land and would earn no return on his own capital. This table is also organized in the form of a matrix, the variables being (1) borrowed money as a percentage of total capital or outlays and (2) the productivity of total capital or outlays. The interest rate which the borrower is willing to pay has been calculated on the assumption that he is willing to pay the lender as interest the full product of the total capital (that is, the borrowed money plus his own capital). Thus, for example, if the productivity of the total capital is 10 per cent and the borrowed money is 50 per cent of the total capital, it is assumed that the borrower would be willing to pay 20 per cent on the amount borrowed, foregoing any return on his own capital.

In actual practice, the productivity of capital in agriculture would not be expected to be higher than 10 per cent per year. With a productivity of 10 per cent per year, the potential borrower would be willing to pay an interest rate of more than 100 per cent per annum only if the amount of borrowed money were less than 10 per cent of the total capital. The smaller the percentage of borrowed capital, the higher the interest rate which the borrower may be willing to pay; in Table 6, the rate reaches 1,000 per cent per annum for a productivity of capital of 10 per cent and borrowed money constituting 1 per cent of total capital.

This situation on the demand side may be compared with the situation on the supply side. As shown by Table 5, even with defaults amounting to 50 per cent of total loans and a normal interest rate of 50 per cent per annum, the lender would need to charge only 200 per cent per annum to compensate fully for defaults. A comparison of this figure with the high figures in Table 6 for less extreme assumptions suggests that the exceptionally high rates of interest in the unorganized money market are due more to excessive demand than to a premium to insure lenders against the risk of default. As a matter of fact, the rate of default, although high, would hardly ever be as high as 50 per cent. On loans granted by credit institutions, which are usually adequately secured by good collateral, such as land, the rates of default have been exceptionally low. Thus, for example, the Land and Agricultural Bank of Kenya, though limited in the size of its operations, has had very few defaults: of the total interest payments which have fallen due since the bank's inception in 1931, only 1.4 per cent had to be written off and only 1.3 per cent of the interest was overdue

at the end of 1954. The amount of defaults of the Land Bank of Tanganyika also has been small: between its inception in 1951 and December 1954, only 2.96 per cent of interest payments became overdue. Of course, in some cases where the management of the credit institutions has been poor or because of special circumstances, the rate of default has been much higher. In Iraq, the average rate of delinquency[31] has been said to vary between 20 per cent and 40 per cent. In Jordan, there was a high rate of delinquency, especially after the moratorium law was passed in 1947. In Lebanon and Syria, there has been practically no delinquency among private credit institutions, but administrative laxity caused a considerable number of delinquencies when, after World War II, the Government lent money directly to agriculturists.

It is true, of course, that the average rate of default for the unorganized money market as a whole cannot be measured only from loans secured by good collateral, such as land. Defaults on loans with poor collateral or with no security should also be studied. A good test would be the number of defaults when agriculturists are suffering a loss of income arising from a depression. The experience of the state pawnshops in Indonesia provides some relevant evidence on this point. The percentage of unredeemed pawns has generally been low, and even during the worst depression years of 1930–32 the value of unredeemed pawns which were auctioned never exceeded 15 per cent of the total pawned.[32] The defaults on unsecured loans tend to be higher than those on secured loans, but they are held down by virtue of the fact that professional and other moneylenders have moral, economic, and social ways of exerting pressure to make the borrower repay. Some of these factors include public identification of the borrower as a debtor, public disgrace as an unreliable person, and, most important of all, the possibility that further loans will not be available when needed.[33]

In addition to the evidence on low defaults cited above, it should be borne in mind that the assumption on which Table 5 is based (i.e., that the lender recovers no money from defaulters) is not at all realistic as regards secured loans. It may be concluded, therefore, that the urgent and inelastic demand of borrowers and the absence of alternative sources of credit are the principal factors that enable moneylenders to exact very high rates of interest.

[31] This is not the same as defaults and only indicates tardy repayments.

[32] See Economic Commission for Asia and the Far East, *Mobilization of Domestic Capital: Report and Documents of the First Working Party of Experts* (Bangkok, 1952), p. 122.

[33] See Reserve Bank of India, *All-India Rural Credit Survey* (Bombay, 1954), Vol. 2, pp. 171–72, for details on how the moneylender in India insures repayment on unsecured loans.

Evaluation of Measures to Reduce Interest Rates

The measures taken by governments to bring down interest rates may be grouped under four headings: (1) laws or decrees stipulating maximum limits for the rates of interest which may be charged by moneylenders and credit institutions in rural areas or in the agricultural sector; (2) laws designed to curb moneylenders' malpractices which have raised the effective rate of interest; (3) the sponsoring or the encouragement of the development of private agricultural credit institutions, such as cooperative societies, land mortgage banks, village banks; (4) loans to the agricultural sector, either directly or through intermediary credit institutions.

Legal measures

Legal measures to control interest rates have been adopted in most underdeveloped countries. In Burma, the legal maximum rate is 12 per cent per annum for loans with collateral and 18 per cent per annum for loans without collateral. In Thailand, the legal maximum rate is 15 per cent. In most states in India the maximum stipulated rate (simple interest) on unsecured loans is generally about 12 per cent per annum: in Hyderabad, the maximum rate is 9 per cent; in Madras, it is 5½ per cent; while in Uttar Pradesh, it is 24 per cent. In Pakistan, the maximum rates (simple interest) are 12 per cent on secured loans and 18 per cent on unsecured loans in the Punjab; in Bengal, they are 15 per cent on secured loans and 25 per cent on unsecured loans. In Korea, the legal maximum rate, which was established 40 years ago, is 20 per cent per annum.

The maximum permissible rate in many Latin American countries is around 12 per cent per annum. In Chile, the maximum rates are between 12 and 18 per cent per annum.

Maximum rates of interest have also been established in British colonial Africa. In Nigeria, the maximum rate allowed is 12½ per cent on the first mortgage on property, 15 per cent on the second mortgage, and 45 per cent on promissory notes.

In both Jordan and Lebanon, the legal maximum rate is 9 per cent per annum, the law in Jordan being a survival from the Ottoman days. In Iraq, the legal rate (presumably for credit institutions) is 7 per cent per annum. According to a law of 1933, a landlord is not allowed to charge interest on advances to cultivators, but this has been circumvented by the landlord collecting a share of the crop far out of proportion to the cost of the seed furnished to the cultivator.

With some exceptions, legal maximum rates for ordinary lending are usually less than 18 per cent per annum. For pawnbroking, however,

in at least two countries—Ceylon and the Philippines—the maximum permissible rates seem to be higher. In Ceylon before World War II, the maximum rate on pawns of Rs 20 or less was 24 per cent per annum, and for pawns of more than Rs 20 it was 19.2 per cent. In the Philippines, the legal maximum rates for pawnshops in Manila since the war has been 30 per cent per annum for loans of less than P 100, 24 per cent for loans between P 100 and P 500, and 14 per cent for loans exceeding P 500.

Attempts to lower interest rates by law have not been successful. Usually, nominal rates conforming to the legal rates are recorded, but other ways are developed to obtain higher effective rates. A promissory note may be obtained for a sum larger than that actually lent; a separate additional promissory note may be made in favor of a relative of the moneylender to cover the extra interest; interest computed at the legal rate may be deducted in advance from the amount lent; a loan transaction may be disguised as a forward purchase with false valuation of the debtor's produce; or a contract which is legally unobjectionable may be combined with an illegal, informal understanding on the substance of the contract.

As a result of such evasions, interest rates in underdeveloped countries have generally been higher than the rate permitted by law. Thus, in India in 1951 most of the borrowings by cultivators from traders, moneylenders, and landlords were at rates much higher than the legal maximum. In Bihar, Madras, Orissa, West Bengal, and Hyderabad, the amount of credit obtained at rates higher than the legal maximum was estimated at between 80 and 90 per cent of the total.[34]

The legal rate of 12 per cent per annum has been a failure in Haiti. According to a UN report, it is difficult, in practice, to control the taking of interest rates above 1 per cent per month, in view of the lack of organization of the credit system in Haiti. The same UN report points out that in Chile maximum rates are in practice disregarded because of inflation, which compels the moneylender to protect his capital, and the difficulties of small farmers in obtaining credit from government and banking institutions.[35] In Korea also, because of the inflation, even the rates actually charged by credit institutions have been about 10 to 15 per cent *per month*, compared with the legal maximum of 20 per cent *per annum*.

In order to curb the malpractices of moneylenders, attempts have been made to control legally the terms and conditions under which loans are granted in unorganized money markets through the compulsory registration of moneylenders and their transactions and by regu-

[34] *Ibid.*, p. 174.
[35] See United Nations, *Progress in Land Reform* (New York, 1954), p. 230.

lating land mortgages and the use of crop liens. In India, the main legislative provisions relating to moneylenders cover licensing and registration of moneylenders, maintenance of accounts in prescribed forms, furnishing of receipts and periodic statements of accounts to debtors, fixing maximum rates of interest, protection of debtors from molestation, intimidation, etc., exemption from attachment of items of debtor's property, regulation of mortgages, and penalties for infringement and machinery for enforcement.[36] Other countries, except possibly Pakistan, do not have legislation as comprehensive as that of India, but many, e.g., Burma and Ceylon, have attempted to regulate the activities of moneylenders. In British colonial Africa, all territories except Tanganyika require the local registration and licensing of moneylenders, and standard forms of agreement have to be used by lenders and borrowers.

Other reasons for the failure of attempts to regulate moneylenders are that most moneylenders do not obtain licenses (although required by law) to carry on their business, the law enforcement machinery is generally weak, and governments can do nothing when there is collusion between the borrower and the lender. Thus in the Middle East, "The [lender's] desire for profit, and the [borrower's] need for immediate cash, are so strong that they conspire together not only to break the law, but also to destroy by mutual agreement any documentary evidence which might be used by the borrower against the lender at a later date."[37]

There is, moreover, evidence that in many cases government legislation has caused the supply of rural credit to fall off and the effective interest rate to rise; the greater risks taken by moneylenders in evading the law have added to the cost of lending and sometimes have led to a higher effective rate of interest. An FAO report concludes that "it is a waste of time to legislate against moneylending unless there is an organization to take the place of the moneylenders."[38]

Measures to increase supply of institutional credit

Governments have made some headway in encouraging the development of private agricultural credit institutions and in supplying credit either directly or through central banks and specialized institutions. But the amount of such lending and encouragement is still limited, and it has not been sufficient to reduce significantly the rural rate of inter-

[36] See Reserve Bank of India, *op. cit.*, p. 124.

[37] Technical Meeting on Agricultural Credit for the Arab States, Near East, Beirut, 1954, *Report* (Food and Agriculture Organization, Rome, 1954), p. 19.

[38] *Cooperative Thrift, Credit, and Marketing in Economically Underdeveloped Countries* (FAO Development Paper No. 34, Rome, 1953), p. 5.

est. It should be recognized, however, that there are difficulties in expanding government lending. The difficulties are due not only to inability to ensure the efficient handling of loans and to prevent the abuse of powers by bureaucratic officials but also to both the limitation of resources available to the government and the threat of inflation from excessive credit expansion.

Rural rates of interest cannot be lowered by the simple expedient of flooding the rural areas with agricultural credit created by the printing press or the central bank. Loans by the government have to be limited to the real resources which the government can obtain by taxation and noninflationary borrowing.

Government and central bank lending to the agricultural sector directly or through special financial intermediaries is common in many underdeveloped countries. Government loans to cultivators were granted in Burma, India, and Pakistan as early as 1883 for long-term loans and in 1884 for short-term and medium-term loans, but the amounts lent were not large. In the period since World War II, however, government loans have become Burma's largest single source of supply of credit to the cultivators.

Many countries are taking steps to improve the lending machinery of government and central bank agencies and also to increase the supply of institutional credit to agriculture. The Reserve Bank of India Act was amended in 1955 to enable the Reserve Bank to establish (1) the National Agricultural Credit (Long-Term Operations) Fund and supply it with funds consisting of an initial sum of Rs 100 million plus a minimum of Rs 10 million per year in the first five years and (2) the National Agricultural Credit (Stabilization) Fund with a minimum contribution by the Reserve Bank of Rs 10 million per year for the first five years.

The Central Bank of the Philippines has provided funds to agriculturists through the Rehabilitation Finance Corporation and the National Development Corporation, and it has encouraged the establishment of rural banks. The Central Bank of Chile allocates part of its profits for agricultural financing. In Pakistan, the State Bank Ordinance of 1955 was passed to permit the State Bank of Pakistan to grant loans up to 15 months to cooperative societies for financing agriculture. The central bank may also rediscount agricultural bills for marketing crops or for agricultural development up to a maximum period of five years.

In many countries, the capital of government-owned institutions has been increased and conditions of lending have been changed to make them more effective. The Agricultural Bank in Bolivia was reorganized in 1954, with authority to grant mortgage loans up to 10 years

and to grant credit to small farmers up to 2 years. In Iraq in 1952, the nominal capital of the Mortgage Bank and the Agricultural Bank was increased from ID 1 million to ID 2 million, and that of the Crédit Mobilier from ID 250,000 to ID 1 million. At the same time, the Mortgage Bank of Iraq was authorized to extend 8-year loans, whereas previously loans had been for 4 years; and the maximum amount of any individual loan of the Crédit Mobilier was raised from ID 100 to ID 1,000. In Southern Rhodesia, the Land Bank Act was amended in 1946 to increase the maximum size of individual loans and to extend the maximum period of the loan to 30 years; the Act was again amended in 1953 to make for more efficient administration and the recovery of advances. The capital of the Land and Agricultural Bank in Northern Rhodesia was increased from £650,000 to £1 million in 1954–55. The Government of Kenya in 1954 doubled the capital of the Land and Agricultural Bank of Kenya (established in 1931) from £750,000 to £1.5 million. The ordinance governing the Land Bank of Tanganyika was amended in 1954 to permit the increase of its capital through larger borrowing powers. In the same year, the capital of the Agricultural Credit Bank of Trinidad and Tobago was increased by BWI$720,000, to BWI$4.7 million.

The effectiveness of attempts to increase the supply of institutional credit can be judged by comparing the actual rates of growth in real terms (i.e., at constant prices) with the desired rate of growth. The desired rate of growth is a function of three factors: the present level of institutional credit in the total supply of credit in the unorganized money market; the level (expressed as a percentage of the total) which the supply of institutional credit should reach; and the number of years in which the target is to be achieved. In Table 7, the desired

TABLE 7. ESTIMATES OF RATE OF GROWTH OF INSTITUTIONAL CREDIT REQUIRED TO MEET VARIOUS OBJECTIVES[1]

(*Compound rate in per cent per annum*)[2]

Present Level of Institutional Credit as Per Cent of Total Credit	Institutional Credit to Expand in 20 Years		Institutional Credit to Expand in 10 Years	
	To reach 50 per cent of total credit	To reach 75 per cent of total credit	To reach 50 per cent of total credit	To reach 75 per cent of total credit
1	23 7	26.2	50.6	56.8
3	17.1	19.5	34.9	40.5
5	14.2	16.4	28.2	33.5
10	10.2	12.5	19.6	24.6
20	6.5	8.5	11.6	16.3
25	5.3	7.4	9.2	13.7

[1] For description of table, see text.

[2] On the assumptions that the need for total credit increases by a simple rate of 2 per cent per year and the availability of noninstitutional credit does not change but it is replaced by institutional credit when total supply exceeds demand.

rates of growth have been computed with different assumptions regarding each of the three factors listed above. The supply of institutional credit in the unorganized money market of most underdeveloped countries is probably less than 10 per cent of the total. If the objective is that institutional credit should amount to 50 per cent of the total in 10 years, the required rate of growth of institutional credit would be about 20 per cent per annum.

When the data on the supply of known institutional credit (Table 9) are deflated by the cost of living indices, it is found that the rate of growth of institutional credit since the war[39] has approximated or exceeded 20 per cent per year only in 4 countries (Ceylon, Iran, Panama, and Venezuela) out of 22. In 9 others (Burma, Colombia, El Salvador, Guatemala, Indonesia, Nicaragua, Peru, the Philippines, and Thailand), the rate of growth was between 10 and 15 per cent, while in 5 (Brazil, Costa Rica, Ecuador, Mexico, and Paraguay), it was 5 per cent or less. In 4 countries (Bolivia, Cuba, the Dominican Republic, and Lebanon), the rates were negative.

If, however, the criteria are relaxed, so that either the time period is increased from 10 years to 20 years or the level which institutional credit should reach is lowered to 40 per cent, the rate of growth of institutional credit in most countries in recent years can be looked upon as satisfactory. Of course, for countries where the present level of institutional credit is much less than 10 per cent of the total, the recent rates of growth would be unsatisfactory on either hypothesis.

Outline of a Program for Lowering Interest Rates

Any program to bring down interest rates in unorganized money markets must be comprehensive and should be guided by the principle that interest rates can be lowered only by reducing the demand for loanable funds as well as by increasing the supply.[40] The demand for loanable funds for financing consumer expenditures can be reduced by

[39] Rates of growth of institutional credit, compound per cent per year, during some or all of the years, 1948–55. Since the cost of living index is not as responsive or free from the effects of price-controlled commodities as the index of rural or agricultural wholesale prices, the rates of real growth tend to be exaggerated.

[40] A UN publication lists the following measures for reducing rates of interest: (1) Expand and improve existing credit and banking facilities; (2) augment supply of capital by fostering savings and investment habits; (3) reduce high risks of investment by curbing unsound investments and speculative activities and pursuing orderly development policies; (4) avoid inflationary techniques in financing development; (5) equity participation by government; (6) obtain foreign financing. See United Nations, *Domestic Financing of Economic Development* (New York, 1950), pp. 81–82.

changing social habits and concepts of acceptable standards of well-being. India has passed a law limiting the amount of expenditures which may be incurred for religious and social occasions. Such laws will not prevent people who are bent on spending money for such purposes from doing so; but it is believed that the masses, who are forced by custom to maintain levels of expenditure much above their income, will welcome this law and use it as an excuse to cut unnecessary consumption expenditure.

A reduction in borrowing for productive purposes may not be desirable, especially as the amount of self-financing which can take its place is negligible. Such borrowing can be reduced in the long run only through an increase in savings from higher agricultural output and income. It is not sufficient that the ability of the farmer to save be increased. The willingness to save must also be created. The problem of cheap agricultural credit is inseparable from the whole problem of agricultural development, including such measures as increasing the use of fertilizers and proper seeds; making available adequate marketing facilities, including proper grading, transportation, and storage of crops; and providing an efficient agricultural extension service.

There is no question that merely increasing the supply of loanable funds without reducing or limiting the demand will not solve the problem of high rates of interest. Experience in many underdeveloped countries, especially in Southeast Asia, indicates that an increase in supply merely stimulates demand (mainly for financing consumption) and does not lower the general level of interest rates. Thus a committee on rural indebtedness in Malaya stated:

> Legislation to control usury is rarely effective because both the borrower and the lender usually combine to render it inoperative. If the borrower is to be protected from the effects of usury, the most effective way will be by education which will impress upon him the difference between wise and foolish borrowing. The mere provision of an alternative source of credit at a cheaper rate will not of itself solve the problem by eliminating the usurious moneylender. It may even aggravate the problem by supplying an additional source of credit. The cure for high rates of borrowing is to be found more in the borrower than in the lender.[41]

Even if it is true that the cure for high rates of interest is to be found more on the demand side than on the supply side, the supply of credit should also be increased.[42] Supply should be increased in such

[41] Economic Commission for Asia and the Far East, *Mobilization of Domestic Capital in Certain Countries of Asia and the Far East* (Bangkok, 1951), p. 42, quoting from the Report of the Committee appointed to consider whether the machinery for agricultural credit in Malaya is adequate . . . and to consider . . . the problem of rural indebtedness (Kuala Lumpur, June 29, 1949).

[42] Increasing the supply of institutional credit as one of the means of reducing interest rates has been emphasized in Economic Commission for Asia and the Far East, *Mobilization of Domestic Capital in Certain Countries of Asia and the Far East* (Bangkok, 1951), pp. 41–50.

a way that legitimate credit needs are met at cheaper rates without encouraging borrowing for consumption. This can be achieved by increasing the supply of institutional credit while at the same time taking steps to discourage borrowing from noninstitutional lenders. In this connection, it could be argued that legislation regarding moneylenders which has had the effect of drying up noninstitutional credit may be a blessing in disguise—although in a manner different from that intended by legislators.

Increasing the supply of institutional credit is a difficult problem, but the efforts of governments have had a fair degree of success. One problem is that of getting the commercial banks to lend more to agriculture. This problem cannot be solved merely by opening more branches, because even at present agriculturists who are fairly close to the big cities are as isolated from the organized money market as others living some distance away from the cities. The opening of more bank branches is desirable, but the branches' business will as likely as not be confined to financing local retail and wholesale trade.

One way of inducing the organized financial institutions to lend more to agriculture is by making agriculturists more creditworthy and generally reducing the risks of lending by lessening the impact of some of the natural calamities (floods, plant and animal diseases); improving the human factor, i.e., reducing carelessness and increasing honesty; reducing the uncertainties of the market through crop insurance, stabilized agricultural prices, etc. The lenders might also take certain steps, such as spreading loans between different types of borrower and region and supervising the use of loans for productive purposes.[43]

Another way of encouraging institutional lending is by government guarantees of agricultural loans. In Egypt, half of the capital of LE 1,000,000 of Crédit Agricole d'Egypte was subscribed by the Government, and the commercial banks were induced to subscribe to the other half by a government guarantee of a dividend of 5 per cent on shares; however, no guarantees were given of the principal. In British colonial Africa, the rates charged by commercial banks on loans (though small in size) to cooperative societies are lower than those charged on commercial loans, because of the government's guarantee. Another approach has been adopted in Mexico where the central bank has encouraged commercial bank financing of certain crops by agreeing to consider such loans as part of bank reserves.

One difficulty which arises in the attempt to increase the supply of

[43] This has been tried with fair success in Bolivia, Brazil, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Paraguay, Peru, Uruguay, and Venezuela, especially by credit institutions receiving financial assistance from the Government. It has generally not been tried at all in Asia and the Middle East, except to a small extent in the Philippines and Thailand.

institutional credit and to lower rural rates of interest is the nature of the land reform program in a number of underdeveloped countries, especially in Asia. In these countries, laws have been passed to prevent agricultural land from falling into the hands of moneylenders and other nonagriculturists. This means that the use of land as collateral to obtain low interest loans is automatically denied to agriculturists. One way of solving the dilemma created by not wishing land to fall into the hands of loan sharks and usurious moneylenders and yet wanting the agriculturists to capitalize on their limited assets—land—is to follow the practice adopted in Egypt. Egypt has a "Five Feddan Law" which prevents expropriation of land from farmers owning five feddans or less (a feddan is roughly equal to an acre). Exemptions from this law have been given, however, on loans granted by the Crédit Agricole d'Egypte, which charges low rates of interest. Other countries therefore might consider granting exemption from such laws to special financial institutions, such as cooperatives, which are prepared to grant loans at low interest rates.

Although some authorities and some writers on the subject may be more ambitious, it seems prudent to recognize that in the nature of things the average rate of interest will be higher in an underdeveloped country than in a more developed country, and that the rates in the unorganized sector will be higher than in the organized money market. This suggests that attempts to reduce the already comparatively low rates charged by cooperative societies are not warranted.[44] Furthermore, it appears that the rates charged by governments and government-owned agricultural banks are often much lower than warranted. It would be better to increase the supply of institutional credit by ploughing back the earnings obtained by charging higher interest rates than to give tremendous windfall benefits to a few borrowers. Thus the average rate of interest in the unorganized money market could be lowered more rapidly.

There are, in fact, disadvantages in supplying institutional credit to the farmers at too low a rate. A report on agricultural credit in the Arab states, although expressing the view that rates of interest should be reasonably low, states, "Although low interest rates have the advantage of making credit cheaper to farmers and consequently increasing his income, yet they might encourage the farmers to use their loans extravagantly and unproductively with the consequence that when the loans fall due they are unable to honor their obligations."[45]

[44] In 1946, the Indian Cooperative Planning Committee recommended that every effort should be made to reduce the rate charged by cooperative societies so as not to exceed 6½ per cent per annum.

[45] Technical Meeting on Agricultural Credit for the Arab States, Near East, Beirut, 1954, *Report* (Food and Agriculture Organization, Rome, 1954), p. 14.

The exceptionally high interest rates quoted in Table 11 in the Appendix are not alarming as long as their quantitative importance is small. Even in the more developed countries, high rates on loans of insignificant importance are to be found. In the United States, the legal maximum and actual rate charged on personal loans by finance corporations is 2½ per cent per month or 30 per cent per annum in many states, for example in Maryland and Virginia. In France, rates for installment credit are 18.55 per cent for 4 H.P. Renault cars, 30.80 per cent for radios, and as high as 40 or 50 per cent on some installment credit sales.[46] The weighted average rate in the unorganized money market in most underdeveloped countries is probably in the neighborhood of 30 per cent per annum. A reduction to a level of 18 to 24 per cent within the next few decades would be an achievement.

Summary

The unorganized money market is generally larger than the organized money market. Its nature and working are quite different from that of the organized money market. Noninstitutional sources of supply, such as moneylenders, landlords, shopkeepers, relatives, and friends, are more important than credit institutions and thus business is carried on in a personal way and not subjected to standardized procedures.

The direct connection between the two money markets is rather poor and is less close than the connection between the organized money markets in underdeveloped countries and world money markets. The organized and unorganized money markets are, however, loosely connected through large exporters, wholesalers, and landlords who borrow in the organized market and carry out some relending in the unorganized market.

Interest rates in the unorganized money market range from fairly low rates charged by the cooperative credit societies to the very high and exorbitant rates charged by loan sharks to borrowers with poor credit ratings or to those in urgent need of funds. The major portion of the loans, however, are granted at rates in between these two extremes. It is estimated that in the majority of countries the weighted average rate of interest in the unorganized money market must lie between 24 per cent and 36 per cent per annum.

The high rates of interest prevailing in the unorganized money

[46] Pierre Cauboue, "Competition Among Banks in France and the Fixing of Their Rates," Banca Nazionale del Lavoro, *Quarterly Review* (Rome), June 1955, p. 95.

market have been a heavy burden to the agriculturists. Annual interest payments have been fairly large in relation to the net income of the farmer, thus reducing his ability to make improvements on the land.

The high rates of interest are due to both demand and supply factors and stem from the economic and social conditions prevailing in underdeveloped countries. The need for funds by agriculturists is more urgent than the need of borrowers in the organized money market, because the low level of agricultural income makes it practically impossible for the farmer to set aside funds for self-financing. The supply is small because of the low savings, even of those in the upper income brackets, and the lack of institutional arrangements to mobilize and channel the available savings into the unorganized money market. It seems, however, that the exorbitant rates of interest charged by loan sharks and unscrupulous moneylenders are due mainly to the semimonopolistic position occupied by them.

Generally speaking, there are no seasonal and cyclical fluctuations in interest rates, such as occur in the organized money market. The rates charged by moneylenders and by credit institutions do not vary with the cycle. The quantities lent, however, have varied, with the supply from credit institutions expanding more rapidly in the boom and contracting much faster in the slump. Since the rate charged by credit institutions is much lower than the rate charged by the moneylenders, the weighted average rate of interest in the unorganized money market has fallen in the boom and risen in the slump; this is the opposite of the movements in the organized money market.

Governments have attempted to influence the cost and availability of credit in the unorganized money market through direct lending to the agriculturists and by controlling the rate of interest and the conditions of moneylending. Although some success has been achieved, these measures, generally speaking, have not as yet lowered rates of interest, partly because of inflationary pressures created by deficit financing for such lending and other expenditures and partly because controls have been evaded.

In view of the fact that the unorganized money market is larger than the organized money market, and since the two markets have not been closely connected, the use of orthodox monetary policy as an instrument of economic policy has very limited possibilities in underdeveloped countries. The cost and availability of credit in the unorganized money market can be influenced by the central bank either by improving the link between the two money markets or by having a large amount of credit supplied by it directly or indirectly through credit institutions and even through moneylenders. There are inflationary dangers in the latter approach, but the art of central banking

in underdeveloped countries is to be able to steer the monetary system into a position of dependence on the central bank without inflation, so that when inflationary pressures arise, the authorities can cut credit not only in the organized money market but also in the unorganized money market.

APPENDIX

The eight publications listed below have been used extensively as sources of some of the data in the four tables in this Appendix (Tables 8–11). In the notes to the tables, these publications are identified briefly by "keys," which are shown in brackets before the detailed citations below. For other sources that have been used, complete citations are given in the notes to the tables.

[Beckhart] B. H. Beckhart, ed., *Banking Systems* (New York, 1954).

[Conference, Beirut] Agricultural Credit Conference, Beirut, 1953, *Agenda, Working Materials, and Proceedings* (mimeographed).

[Conference, California] International Conference on Agricultural and Cooperative Credit, University of California, 1952, *Proceedings* (Berkeley, Calif., 1952), 2 vols.

[ECAFE, Mobilization] Economic Commission for Asia and the Far East, *Mobilization of Domestic Capital in Certain Countries of Asia and the Far East* (Bangkok, 1951).

[Jacoby] Erich H. Jacoby, *Agrarian Unrest in Southeast Asia* (New York, 1949).

[Johnson] V. Webster Johnson and Edwin C. Johnson, *Farm Credit Activities in Selected Countries with Reference to Credit Programs for Underdeveloped Areas* (For the Ford Foundation, the International Bank for Reconstruction and Development, the Foreign Operations Administration, and Harvard University, mimeographed, September 1954).

[UN, Land] United Nations, *Land Reform: Defects in Agrarian Structure as Obstacles to Economic Development* (New York, 1951).

[UN, Progress] United Nations, *Progress in Land Reform* (New York, 1954).

TABLE 8. INDICATORS OF THE RELATIVE SIZE OF THE UNORGANIZED MONEY MARKET[1]

Country and Currency Unit	Year[2]	Agricultural or Rural Indebtedness				
		Value[3] (*million currency units*)	As Per Cent of			
			Claims of banking system on private sector[4]	Currency in circulation[4]	Income originating in agricultural sector[5]	National income
Brazil (cruzeiro)	1951	14,048	15	49	16	6
Burma (kyat)	1930	750	...	...	137	76
Cambodia (riel)	1952	500	...	49	...	...
Ceylon (rupee)	1951	47	25	13	...	1
	1950–51	94	51	25	...	2
Colombia (peso)	1952	440	43	73	16	7
Cyprus (Cyprus pound)	1952	5	54	80	...	9
El Salvador (colón)	1944–48	130	277	248	39	20
India (rupee)	1929–30	9,000	508	357	109	57
	1951–52	20,000	336	171	41	21
Japan (yen)	1930	4,500	56	205	215	43
Jordan (dinar)	1952	2	...	...	10	...
Lebanon	1951–52	276	78	135	50	25
(Lebanese pound)	1953	65	18	31	...	6
Mexico (peso)	1950	11,500	473	395	154	31
Pakistan	1951	1,007	110	43	9	6
(rupee)	1951	1,128	123	48	10	6
Syria (Syrian pound)	1952	80	37	32	9	6
Thailand	1934–35	100	29	69	23	12
(baht)	1952–53	2,059	143	56	14	8
Turkey (lira)	1952	2,000	81	156	32	16

[1] Notes describing the data and the sources from which the data have been drawn are given below in the section, "Descriptive Notes and Sources of Data, by Country."
[2] Estimates for more than one year for a country are in general not comparable, since the data are drawn from different sources.
[3] Rural indebtedness has been used for Brazil, Ceylon, India (1929–30), and Thailand (1952–53). For other countries, data relate to agricultural indebtedness, except that for Pakistan estimates based on both agricultural and rural indebtedness have been made. See text, footnote 4.
[4] End-of-year figures. For Cyprus, India (1929–30), Lebanon (1953), and Syria, only loans and advances are included in claims of the banking system.
[5] Including livestock production, forestry, and fisheries.

TABLE 8: DESCRIPTIVE NOTES AND SOURCES OF DATA, BY COUNTRY

The sources listed have been used mainly for data on agricultural or rural indebtedness. Other data have been taken, wherever possible, from International Monetary Fund, *International Financial Statistics* (Washington), and United Nations, *Statistics of National Income and Expenditure* (Statistical Papers, Series H, New York).

BRAZIL. Rural indebtedness is estimated as 16 per cent (the ratio of rural credit to gross value of rural production reported in the source, given below) of the value of income originating in the agricultural sector.

Source: Alexandre Kafka, "Brazil," in Beckhart, p. 110.

BURMA. Sources: *Report of the Burma Provincial Banking Enquiry Committee, 1929–30* (Rangoon, 1930); V.K.R.V. Rao, *The National Income of British India, 1931–32* (London, 1940), pp. 232–33.

CAMBODIA. Currency in circulation as of November 1955.

Sources: Economic Commission for Asia and the Far East, *Economic Bulletin for Asia and the Far East* (Bangkok); Thonni Thoutch, "On the Possibilities of Agricultural Credit in Cambodia and on the Problems Which Cambodia Must Face in Order to Ensure Adequate Agricultural Financing," in Conference, California, p. 633.

CEYLON. The value of rural indebtedness for 1951, probably an underestimate, is based on information gathered from lenders, which shows outstanding advances by registered moneylenders and pawnbrokers only; the total of such advances during the year was Cey Rs 90 million. The value of rural indebtedness for 1950–51 is based on information gathered from borrowers in a survey covering 108 villages with 22,082 families, with a total debt of Cey Rs 1.75 million. The per family indebtedness for the whole agricultural population is assumed to have been the same as for the sample, with the further assumptions that the average family had 4.61 members and the distribution of population between the urban and rural sectors in Ceylon was the same in 1950 as in 1946.

Sources: For 1951, Department of Census and Statistics, *Census of Financial Institutions, 1952* (Colombo, 1954); for 1950–51, Department of Census and Statistics, *Final Report on the Economic Survey of Rural Ceylon, 1950–51* (Colombo, 1954), p. 44.

COLOMBIA. Agricultural indebtedness is based on the statement in the source that the agricultural loans of the Agricultural Bank, which in October 1952 amounted to Col$220 million, account for more than half of all credits granted to private agricultural producers.

Source: Department of Commerce, *Investment in Colombia: Conditions and Outlook for United States Investors* (Washington, 1953), pp. 46–47.

CYPRUS. Currency in circulation as of 1953.

Source: Colonial Office, *Digest of Colonial Statistics* (London).

EL SALVADOR. Agricultural indebtedness was estimated by applying to income originating in the agricultural sector the official estimate of the ratio of credit used in financing ten important crops to their total cost of production.

Source: Economic Commission for Latin America, *Agricultural Credit in El Salvador* (UN Document E/CN.12/167/Add.2, New York, May 1, 1950), p. 50.

INDIA. In the 1929–30 estimates, claims of the banking system and currency in circulation are as of 1930, and national income, which excludes Burma but includes Pakistan, is as of 1931–32; the estimate of loans and advances of the banking system is based on the loans and advances of the Imperial Bank of India in 1930, adjusted by reference to the ratio of such loans and advances to total scheduled bank loans and advances in January 1936. The 1951–52 estimates are derived from the findings of the All-India Rural Credit Survey that 0.9 per cent of total borrowings of cultivators were from commercial banks and the fact that the advances of all reporting commercial banks on June 30, 1951 totaled Rs 183 million.

Sources: For 1929–30, *Indian Central Banking Enquiry Report, 1929–30* (New Delhi, 1931), and V.K.R.V. Rao, *The National Income of British India, 1931–32* (London, 1940); for 1951–52, Reserve Bank of India, *All-India Rural Credit Survey* (Bombay, 1954), Vol. 2, pp. 167 and 181.

JAPAN. Agricultural income is assumed to be 20 per cent of national income.

Sources: Hideo Tokoro, "Agricultural Credit in Japan," in Conference, California, p. 844; Johnson, p. 18.

JORDAN. Source: Economic Research Institute, "Report on Agricultural Credit in Jordan," p. 11, in Conference, Beirut.

LEBANON. The 1951–52 estimates are based on the statement in the source that interest payments amount to one fourth of agricultural income and on the assumptions that half of total national income is agricultural income and the rate of interest is as high as 50 per cent.

Sources: For 1951–52, Joseph Abi-Fadel, "Agriculture and Agricultural Credit and Cooperatives in Lebanon," in Conference, California, p. 903; for 1953, Economic Research Institute, "Report on Agricultural Credit in Lebanon," p. 11, in Conference, Beirut.

MEXICO. Agricultural indebtedness is based on an estimate in the source (given below) that loans granted by the National Bank for Ejidal Credit and the National Bank for Agricultural Credit combined provide about 10 per cent of total outstanding agricultural loans.

Source: Margaret G. Myers, "Mexico," in Beckhart, pp. 578–81.

PAKISTAN. The figure of PRs 1,128 million is an estimate of rural indebtedness. Both estimates are based on the assumption that the per capita indebtedness recorded in the Punjab in 1951 also applied to Pakistan as a whole.

Sources: Board of Economic Inquiry, Punjab, *Report on the Need and Supply of Credit in the Rural Areas of the Punjab* (Lahore, 1951), p. 7; Central Statistical Office, *Pakistan Statistical Yearbook, 1952* (Karachi, 1954).

SYRIA. The estimate of agricultural indebtedness is based on the assumption that the ratio of agricultural credit supplied by official banks to total agricultural credit is the same as in Lebanon. The figures for agricultural income and national income are for 1953.

Sources: Economic Research Institute, "Report on Agricultural Credit in Syria," p. 8, in Conference, Beirut; Ministry of National Economy, *General Monthly Bulletin of Current Statistics* (Damascus).

THAILAND. Percentages for 1934–35 are based on 1934–35 data for the value of agricultural indebtedness and on 1938 data for the other series. The estimate of rural indebtedness in 1952–53 for the whole of Thailand is based on a sample of 6,419 families, with the further assumption that the average family has 4 members. For this sample, the ratio of rural indebtedness to income originating from agriculture is 13.1 per cent, instead of 14 per cent.

Sources: For 1934–35, Jacoby, pp. 233–36; for 1952–53, Ministry of Agriculture, *Thailand Economic Farm Survey, 1953* (Bangkok, 1953).

TURKEY. Source: Johnson, p. 9.

Table 9. Indicators of the Link Between Organized and Unorganized Money Markets

Country and Currency Unit	End of Year	Recorded Institutional Credit to Agriculture[1]						Commercial Banks' Credit to Agriculture as Per Cent of Their Total Credit to Private Sector
		Value (*million currency units*)[2]	As Per Cent of					
			Income originating from agriculture[3]	Currency in circulation	Total supply of credit in unorganized market (1)[4]	(2)[5]	(3)[6]	
ASIA								
Burma (kyat)	1948	36.9	2.1	11.0	14	5	2	3.9
	1952	50.2	2.7	12.2	18	7	3	1.5
	1953	102.4	5.1	20.0	34	13	5	1.9
	1954	85.3	4.3	14.6	29	11	4	0.3
Ceylon (rupee)	1948	14.9	...	6.2	...	...	...	5.0
	1951	66.7	...	17.4	...	...	...	...
	1953	95.2	...	27.9	...	...	...	...
	1954	106.6	...	30.5	...	...	...	...
Indonesia (rupiah)	1952	415.7	0.9	9.5	6	2	1	...
	1953	604.1	...	11.6	...	...	...	14.5
	1954	617.4	...	8.2	...	...	...	13.9
Pakistan (rupee)	1953	19.8	0.2	0.9	1	n.a.[7]	n.a.[7]	2.9
	1954	18.0	...	0.8	...	...	...	1.9
Philippines (peso)	1950	174.8	7.0	26.1	47	18	7	34.4
	1952	299.3	10.7	46.5	71	27	11	40.5
	1954	370.4	11.5	54.4	76	29	12	38.2
	1955	377.0	...	55.1	...	...	...	36.3
Thailand (baht)	1948	66.2	0.6	3.0	4	n.a.[7]	n.a.[7]	...
	1949	96.7	0.7	4.1	5	n.a.[7]	n.a.[7]	0.7
	1950	106.8	0.7	3.5	5	n.a.[7]	n.a.[7]	0.7
LATIN AMERICA								
Bolivia (boliviano)	1948	268.1	...	12.9	...	...	...	11.9
	1952	416.4	...	6.9	...	...	...	6.8
	1953	473.6	...	4.1	...	...	...	6.4
Brazil (cruzeiro; billions)	1951	10.9	13.0	38.6	87	33	13	8.2
	1952	14.0	14.5	44.3	97	36	15	8.7
	1953	16.7	14.6	44.0	97	36	15	8.7
	1954	20.5	13.7	41.2	91	34	14	8.9
Colombia (peso)	1948	167.1	4.6	19.4	71	27	11	16.8
	1953	470.8	6.2	29.0	n.a.[7]	38	15	21.9
	1954	651.7	7.6	36.9	n.a.[7]	45	18	24.8
Costa Rica (colón)	1950	62.9	...	...	...	...	...	...
	1952	76.4	...	60.9	...	...	...	...
	1953	80.4	...	58.3	...	...	...	...
	1954	85.9	...	55.3	...	...	...	...
Cuba (peso)	1951	36.9	...	17.7	...	...	...	15.4
	1952	36.8	...	15.5	...	...	...	15.6
	1953	17.0	...	7.5	...	...	...	16.0
	1954	27.4	...	11.2	...	...	...	13.3
Dominican Republic (peso)	1953	43.9	...	152.4	...	...	...	2.1
	1954	17.8	...	55.0	...	...	...	2.4
	1955	31.9	...	83.4	...	...	...	2.3
Ecuador (sucre)	1948	165.7	...	48.0	...	...	...	5.0
	1952	208.1	7.3	40.5	49	18	7	1.6
	1953	226.2	7.6	41.1	51	19	8	2.2
	1954	244.9	7.3	38.3	49	18	7	2.8
El Salvador (colón)	1952	60.3	...	67.4	...	...	...	...
	1953	41.6	...	46.0	...	...	...	...
	1954	60.8	...	62.4	...	...	...	...
	1955	119.2	...	131.6	...	...	...	...
Guatemala (quetzal)	1949	8.3	4.3	22.1	29	11	4	...
	1952	10.7	4.2	23.6	28	11	4	...
	1953	13.0	5.1	24.4	34	13	5	...
	1954	19.1	7.3	35.4	49	18	7	...
Honduras (lempira)	1954	5.1	1.7	13.1	11	4	2	5.7
	1955	8.3	2.6	24.8	17	6	3	8.6

TABLE 9 (*concluded*). INDICATORS OF THE LINK BETWEEN ORGANIZED AND UNORGANIZED MONEY MARKETS

Country and Currency Unit	End of Year	Recorded Institutional Credit to Agriculture[1]: Value (*million currency units*)[2]	Recorded Institutional Credit to Agriculture[1]: As Per Cent of: Income originating from agriculture[3]	Currency in circulation	Total supply of credit in unorganized market: (1)[4]	(2)[5]	(3)[6]	Commercial Banks' Credit to Agriculture as Per Cent of Their Total Credit to Private Sector
LATIN AMERICA (*concluded*)								
Mexico	1953	2.6	25.5	66.1	n.a.[7]	64	26	7.3
(peso;	1954	2.9	24.4	62.3	n.a.[7]	61	24	6.2
billions)	1955	3.2	...	...	...	...	...	8.8
Nicaragua	1949	59.8	...	104.5	...	...	...	...
(córdoba)	1953	162.3	...	146.0	...	...	...	...
	1954	235.5	...	185.7	...	...	...	...
	1955	273.7	...	220.5	...	...	...	...
Panama	1952	0.6	0.6	...	4	2	1	5.2
(balboa)	1953	0.6	...	...	...	...	...	5.2
	1954	0.8	...	...	...	...	...	5.5
	1955	1.6	...	...	...	...	...	7.0
Paraguay	1952	173.7	8.8	48.5	59	22	9	43.4
(guaraní)	1953	280.8	8.9	58.7	59	22	9	38.3
	1954	409.7	...	...	...	...	...	...
Peru	1948	223.1	6.6	26.7	52	20	8	16.0
(sol)	1952	466.4	6.4	23.0	50	19	7	13.7
	1953	614.4	7.7	35.0	64	24	10	14.9
	1955	1,093.7	...	...	...	...	...	16.3
Venezuela	1948	38.5	...	4.9	...	...	...	...
(bolívar)	1952	108.2	...	12.1	...	...	...	...
	1953	141.9	...	15.4	...	...	...	...
	1954	155.9	...	...	...	...	...	...
MIDDLE EAST								
Egypt (Egyptian pound)	1949–50	21.2	7.6	11.2	51	19	8	...
Iran (rial)	1951	561.6	...	8.2	...	...	...	...
Iraq	1948	0.8	...	2.3	...	...	...	...
(dinar)	1952	1.1	...	3.7	...	...	...	...
	1954	2.2	...	5.3	...	...	...	...
Lebanon	1948	7.3	4.4	3.9	29	11	4	...
(Lebanese	1950	4.4	2.5	2.2	16	6	3	...
pound)	1952	6.2	2.3	3.0	16	6	2	...
Syria	1953	31.4	...	...	...	...	...	7.8
(Syrian pound)	1954	48.3	...	...	...	...	...	7.8

[1] Except as otherwise indicated in the section, "Descriptive Notes and Sources of Data, by Area," below, the value of recorded institutional credit to agriculture refers to outstanding loans of the central bank, commercial banks, cooperatives, and other credit institutions. The coverage is fairly complete for most of the countries included in the table, with the exception of Colombia, Costa Rica, Cuba, the Dominican Republic, El Salvador, Iraq, Pakistan, and Venezuela.

There are certain discrepancies between the figures in this table and those recorded in the *Report of the Center on Agricultural Financing and Credit for Asia and the Far East, Lahore, 1–13 October 1956* (Food and Agriculture Organization, Rome, February 1957), Table IV, which became available only after the preparation of the present paper had been completed. The discrepancies are to be explained in terms of differences in coverage and in the sources from which the figures have been drawn.

[2] Billion currency units for Brazil and Mexico.

[3] For Brazil, Colombia, Ecuador, Guatemala, Honduras, Mexico, Panama, Egypt, and Lebanon, income originating from agriculture was estimated from the relation of such income to total national income during an earlier period. For details, see section, "Descriptive Notes and Sources of Data, by Area," below.

[4] On the assumption that the total supply of credit is equal to 15 per cent of income originating from agriculture.

[5] On the assumption that the total supply of credit is equal to 40 per cent of income originating from agriculture.

[6] On the assumption that the total supply of credit is equal to 100 per cent of income originating from agriculture.

[7] Not applicable because the recorded supply of institutional credit to agriculture would be greater than the total supply of credit under this assumption. In Pakistan and Thailand, the inapplicability arises from the conclusion established in Table 8 that the total supply of credit (size of unorganized money market) was 10 per cent and 14 per cent, respectively, of income originating from agriculture.

TABLE 9: DESCRIPTIVE NOTES AND SOURCES OF DATA, BY AREA

The sources listed are in addition to International Monetary Fund, *International Financial Statistics* (Washington), and United Nations, *Statistics of National Income and Expenditure* (Statistical Papers, Series H, New York), which have been used wherever possible.

ASIA

BURMA. The institutions included are the Government (loans granted) and commercial banks.

Source: Union Bank of Burma, *Bulletin* (Rangoon).

CEYLON. The institutions included are commercial banks, cooperative societies, the Agricultural and Industrial Credit Corporation, and the State Mortgage Bank. Agricultural credit outstanding of commercial banks for 1951, 1953, and 1954 was estimated from the ratios of loans and advances to agriculture to total loans and advances outstanding at the end of 1948–50. Loans outstanding to agriculture by the Agricultural and Industrial Credit Corporation were calculated from the average share of loans granted for agricultural purposes to total loans granted during 1947/48–1953/54.

Sources: Department of Census and Statistics, *Statistical Abstract of Ceylon, 1951* (Colombo, 1951); Central Bank of Ceylon, *Bulletin* (Colombo); Cooperative Department, *Administration Reports on the Working of Cooperative Societies* (Colombo).

INDONESIA. The institutions included are the Desa Bank, the Bank Rajkat Indonesia, the Bank Negara Indonesia, and government-owned pawnshops. Agricultural loans outstanding of the Bank Negara Indonesia for 1952 were estimated from the rate of increase between 1953 and 1954.

Sources: Bank Indonesia, *Bulletin* (Djakarta); Central Bureau of Statistics, *Statistical Abstract, 1955* (Djakarta, 1955).

PAKISTAN. The institutions included are commercial banks, the Agricultural Development Finance Corporation, and the Industrial Finance Corporation.

Source: State Bank of Pakistan, *Bulletin* (Karachi).

PHILIPPINES. The institutions included are commercial banks, pawnshops in Manila, the Rehabilitation Finance Corporation and (beginning with 1954) the Agricultural Credit and Cooperative Financing Administration, and rural banks. The 1955 data are as of September.

Sources: Central Bank of the Philippines, *Statistical Bulletin* (Manila), March 1955, and *Annual Report, 1954* (Manila, 1955).

THAILAND. The institutions included are primary cooperative societies and commercial banks.

Sources: Chamnian Saranaga, Chesada Chongchitara, and Songsang Bhindhuvatana, "Rural Cooperative Credit in Thailand," in Conference, California, p. 978; Bank of Thailand, *Current Statistics* (Bangkok).

LATIN AMERICA

BOLIVIA. The institutions included are the Central Bank of Bolivia, mortgage banks, and the Agricultural Bank of Bolivia (new loans granted).

Source: Banco Central de Bolivia, *Boletín* (La Paz).

BRAZIL. The institutions included are the Bank of Brazil and commercial banks. Income originating from agriculture for 1953 and 1954 was estimated on the assumption that it represented the same percentage of total national income as in the period 1949–52. The data for 1954 are as of October.

COLOMBIA. The institutions included are commercial banks and the Agricultural Credit Bank. The value of recorded institutional credit to agriculture for 1948, which represents the balance outstanding of loans and discounts to agriculture by commercial banks, was estimated from the ratio of new loans and discounts granted to agriculture to the total in the same year. Income originating from

agriculture for 1953 and 1954 was estimated on the assumption that it represented the same percentage of total national income as in the period 1950–52.

Source: Banco de la República, *Revista* (Bogotá).

COSTA RICA. The institutions included are the Central Bank of Costa Rica and rural cooperatives.

Source: Banco Central de Costa Rica, *Revista* (San José).

CUBA. The institutions included are the member banks of the National Bank of Cuba. The 1954 data are as of September.

Source: Banco Nacional de Cuba, *Estadísticas Monetarias y Bancarias* (Havana).

DOMINICAN REPUBLIC. The institutions included are commercial banks and the Industrial Credit Bank. Agricultural credit outstanding of the Industrial Credit Bank was estimated from the ratio of agricultural credit to total credit granted in the years indicated.

Source: Banco Central de la República Dominicana, *Boletín Mensual* (Ciudad Trujillo).

ECUADOR. The institutions included are private banks (including the Institute of Agricultural Credit, which began operations in 1949) and development banks (credit granted). For 1952, 1953, and 1954, income originating from agriculture was estimated on the assumption that it represented the same percentage of total national income as in 1950.

Source: Banco Central del Ecuador, *Boletín* (Quito).

EL SALVADOR. Recorded institutional credit to agriculture refers to credit granted to private banks by the Central Reserve Bank of El Salvador.

Source: Banco Central de Reserva de El Salvador, *Revista Mensual* (San Salvador).

GUATEMALA. The institutions included are commercial banks, the National Agricultural Bank, the National Mortgage Bank, and the Institute for the Development of Production. For 1952, 1953, and 1954, income originating from agriculture was estimated on the assumption that it represented the same percentage of total national income as in 1949.

Source: Banco de Guatemala, *Boletín Estadístico* (Guatemala City).

HONDURAS. The institutions included are commercial banks and the Development Bank. Income originating from agriculture for both 1954 and 1955 was estimated on the assumption that it represented the same percentage of total national income as in the period 1950–52.

Source: Banco Central de Honduras, *Boletín Mensual* (Tegucigalpa).

MEXICO. The institutions included are private institutions, national institutions, and the Bank of Mexico. For 1953 and 1954, income originating from agriculture was estimated on the assumption that it represented the same percentage of total national income as in the period 1948–50.

Source: Banco Nacional de Mexico, *Review of the Economic Situation of Mexico* (Mexico, D.F.).

NICARAGUA. The institutions included are commercial banks, the National Bank of Nicaragua, and the Mortgage Bank.

Source: Banco Nacional de Nicaragua, *Revista Trimestral* (Managua).

PANAMA. The institutions included are private banks (branches of U.S. banks, a French bank, and a small locally owned bank) and government banks (the National Bank of Panama, the Savings Bank, and three small provincial banks). Income originating from agriculture for 1952 was estimated on the assumption that it represented the same percentage of total national income as in 1950. The 1952 data are as of September.

Source: Dirección de Estadística y Censo, *Estadística Panameña* (Panama).

PARAGUAY. The institutions included are the Central Bank of Paraguay and private banks.

Source: Banco Central del Paraguay, *Revista* (Asunción).

PERU. The institutions included are commercial banks, savings banks, and the Central Reserve Bank of Peru.

Source: Banco Central de Reserva del Peru, *Boletín* (Lima).

VENEZUELA. Only the Central Bank of Venezuela is included.
Source: Banco Central de Venezuela, *Boletín* (Caracas).

MIDDLE EAST

EGYPT. The institutions included are cooperatives, the Agricultural Credit and Cooperative Bank, and the Agricultural Mortgage Bank.
Source: Paul Fankhauser, "The Cooperative Movement in Egypt," in Conference, Beirut.

IRAN. The institutions included are Bank Melli Iran and rural banks.
Source: Ahmad Houman, "The Present Organization of Agricultural Credit and the Condition of Farmers in Iran," in Conference, California, pp. 777–84.

IRAQ. Only the Agricultural Bank of Iraq is included. All data are for years ended March.
Sources: Agricultural Bank of Iraq, *Annual Reports* (Baghdad).

LEBANON. The institutions included are cooperatives and the Société du Crédit Agricole et Industriel du Liban. Income originating from agriculture for 1952 was estimated on the assumption that it represented the same percentage of total national income as in the period 1948–50.
Source: Economic Research Institute, "Report on Agricultural Credit in Lebanon," p. 10, in Conference, Beirut.

SYRIA. The institutions included are commercial banks and the Agricultural Bank of Syria.
Source: Directorate of Statistics, *Statistical Abstract of Syria, 1954* (Damascus, 1955).

TABLE 10. INTEREST RATES OF COOPERATIVE SOCIETIES AND OF SPECIALIZED AGRICULTURAL BANKS OR INSTITUTIONS OWNED OR SPONSORED BY GOVERNMENT, POSTWAR (1950–54)

(In per cent per annum)

Country	Cooperative Societies			Name of Specialized Agricultural Institution	Lending Rate	Remarks
	Borrowing rate	Lending rate	Remarks			
AFRICA						
Kenya				Land and Agricultural Bank of Kenya	4½	This lower rate, introduced in 1945, caused an increase in applications for long-term loans.
Libya				Government through Barclays Bank	6½	Short-term, 6 months to 1 year, against crops. Government guarantees 80% of the loan.
Nigeria	3½–5	15	Small seasonal advances to farmers.	Nigerian Development Boards	2–5	Medium-term, 2 to 10 years.
Northern Rhodesia	2½–5	5–7½				
Southern Rhodesia				Land and Agricultural Bank of Southern Rhodesia	4½–5½	Rates on farming loans increased from 5% to 5½% in July 1954 because of higher borrowing rates.
Uganda				Uganda Credit and Savings Bank	5–6	Less ½% for punctual repayment. Higher rate for more than 2 years.
ASIA						
Burma		12	Practically all short-term.	State Agricultural Bank	6½	Permitted to grant seasonal and medium-term credits, but most loans seasonal.
Cambodia		12	Short-term, up to 18 months and one third of value of harvest.	Office of Public Credit	4–5	For purchase of land, not over 4 years.
		8	Medium-term, up to 8 years and one third of value of real estate.			
		4	Long-term, up to 15 years.			
Ceylon	3–6	9–12	Mostly short-term loans.	State Mortgage Bank	4–5½	Medium- and long-term. Higher rate for smaller loans.
				Agricultural and Industrial Credit Corporation	5–6½	Loans against primary mortgages only. Higher rate for smaller loans.

TABLE 10 (*continued*). INTEREST RATES OF COOPERATIVE SOCIETIES AND OF SPECIALIZED AGRICULTURAL BANKS OR INSTITUTIONS OWNED OR SPONSORED BY GOVERNMENT, POSTWAR (1950–54)

(*In per cent per annum*)

Country	Cooperative Societies: Borrowing rate	Cooperative Societies: Lending rate	Cooperative Societies: Remarks	Name of Specialized Agricultural Institution	Lending Rate	Remarks
ASIA (*concluded*)						
India	3–6	6–12	Mostly short-term loans.	Government	6¼	Short- and long-term.
Indonesia	6–12	20	Net rate is 12%, since 8% is forced savings.	Government	12	
Japan	7–8	9⅛	Short-term credit.	Settlers Fund Financing System	3.65	Up to 20 years. } Total of loans is very small.
				Owner-Farmer Maintenance Fund	5.5	Up to 30 years. }
				Central Cooperative Bank for Agriculture, Forestry, and Fisheries[1] (see p. 138)	4–7.5	Medium- and long-term, up to 25 years.
Pakistan				Government	3½–6½	From 1 to 10 years.
				Agricultural Development Finance Corporation	4–5	Lower rate to cooperatives; higher rate to individuals. Mainly against security of land.
Philippines	5	8	Short- and medium-term loans.	Agricultural Credit and Cooperative Financing Administration	5	Short- and medium-term to cooperatives.
					8	Short-term to farmers.
				Rehabilitation Finance Corporation	2	To rural banks, up to 10 years.
					4	To homesteaders, up to 10 years.
					4–6	Other loans.
Thailand	4–6	8	Long-term, up to 15 years.	Government	4–5	To apex cooperative bank.
		9–10	Short- and medium-term.			
Viet-Nam		6	Long-term, up to 15 years.			
		8	Medium-term, 2 to 8 years.			
		10	Crop loans, 12 to 18 months.			
LATIN AMERICA						
Bolivia				Agricultural Bank of Bolivia	8	Plus other expenses, e.g., cost of trips of bank's technician and guarantor. Lends up to 66% of such collateral as machinery and cattle.

TABLE 10 (*continued*). INTEREST RATES OF COOPERATIVE SOCIETIES AND OF SPECIALIZED AGRICULTURAL BANKS OR INSTITUTIONS OWNED OR SPONSORED BY GOVERNMENT, POSTWAR (1950–54)

(*In per cent per annum*)

Country	Cooperative Societies		Remarks	Name of Specialized Agricultural Institution	Lending Rate	Remarks
	Borrowing rate	Lending rate				
LATIN AMERICA (*continued*)						
Brazil				Bank of Brazil	7	Plus certain other expenses. Supplies 60–70% of total agricultural and rural credit.
Chile				Agricultural Settlement Fund	6–7	Short-term, up to 2 years.
Costa Rica				National Bank of Costa Rica	6	Short-, medium-, and long-term.
Cuba				Bank for Agricultural and Industrial Development		Agricultural Division lends direct to agriculturist and through intermediaries. Short-term loans(up to 18 months) ; medium- and long-term mortgage loans (up to 25 years).
Ecuador				Mortgage Bank of Ecuador	4–8	Loans against personal, mortgage, and chattel guarantees.
				Government	8	Short-term, up to 2 years only.
				Credit Development System Banks (provincial branches)	6–8	Short- and medium-term, up to 5 years. Up to 60% of real estate and 80% of chattel mortgage.
El Salvador		5	Up to 20 years.	Mortgage Bank of El Salvador	5–7	Short- and long-term, but about 90% of total in 1949 was long-term.
Honduras				National Bank of Development	4–6	Plus 2% for production loans. Short-term, up to 18 months. Loans secured by chattel mortgage on crops, farm implements, and livestock.
					8	Plus 1% for administrative costs. Medium-term (4 to 7 years) and long-term (10 to 25 years). Loans secured by mortgage on farm.
Mexico	8–9	11		National Bank for Ejidal Credit	8–9	To cooperatives. } Against up to 70%
					11	To farmers. } of value of crop.

TABLE 10 (*continued*). INTEREST RATES OF COOPERATIVE SOCIETIES AND OF SPECIALIZED AGRICULTURAL BANKS OR INSTITUTIONS OWNED OR SPONSORED BY GOVERNMENT, POSTWAR (1950–54)

(*In per cent per annum*)

Country	Cooperative Societies: Borrowing rate	Cooperative Societies: Lending rate	Cooperative Societies: Remarks	Name of Specialized Agricultural Institution	Lending Rate	Remarks
LATIN AMERICA (*concluded*)						
Paraguay				Bank of Paraguay and its subsidiary, Crédito Agrícola de Habilitación	6–8	Normally short- and medium-term, up to 5 years. Occasionally up to 10 years for purchase of land and buildings.
Peru				Agricultural Development Bank of Peru	6½–8	Plus charges for technical aid. Short-, medium-, and long-term (up to 10 years). Lends up to 75–80% of security.
Uruguay				National Institute for Colonization	5–5½	Long-term, up to 30 years, for purchase of land and improvements. Usually up to 25% of value of farm.
MIDDLE EAST						
Afghanistan				Da Afghanistan Bank and Afghan Agricultural Loan Bank	3–8	Up to 21 years.
Egypt	3	5		Agricultural Credit and Cooperative Bank	3–5	Mainly short-term, but also medium- and long-term. Lower rate to cooperatives; higher rate to farmers.
				Agricultural Mortgage Bank	5	From 5 to 30 years. Up to 60% of value of land.
Iran		9	Plus fine of 12% if not paid by due date. For short-term. Rates of loan banks similar to cooperatives.	Agricultural and Industrial Bank of Iran	6	Plus a progressive commission of 2–5%, which increases with size of loan. Usually short-term; occasionally up to 8 years.
Iraq				Agricultural Bank of Iraq Agricultural and Industrial Bank of Iraq	5–6 7	Up to 10 years; 40% of movable property, 60% of real estate, and 70% of gold.

TABLE 10 (*concluded*). INTEREST RATES OF COOPERATIVE SOCIETIES AND OF SPECIALIZED AGRICULTURAL BANKS OR INSTITUTIONS OWNED OR SPONSORED BY GOVERNMENT, POSTWAR (1950–54)

(*In per cent per annum*)

Country	Cooperative Societies		Remarks	Name of Specialized Agricultural Institution	Lending Rate	Remarks
	Borrowing rate	Lending rate				
MIDDLE EAST (*concluded*)						
Israel				Agricultural Bank of Israel	4½–5	Medium- and long-term, up to 12 years.
				Jewish Foundation Fund	3–4	Up to 25–40 years.
				Palestine Settlement Association	4–6	From 10 to 20 years.
				National Bank of Israel	5–7	From 5 to 10 years.
Jordan	4	7		Development Bank of Jordan	4–6	From 5 to 10 years.
				Arab Land Company	5.5–8	From 8 to 10 years. Prior to 1953, rates were 7–9%.
				Agricultural Bank of Jordan	9	Medium- and long-term, up to 10 years. Law prohibits loans to cooperatives.
Lebanon	9	12		Société du Crédit Agricole et Industriel du Liban	4.8	With government guarantee. } Mainly
					8.5	Without government guarantee. } short-term.
Syria	9	12		Agricultural Bank of Syria	2–6	Short-term (up to 3 years), medium-term (3–8 years), and long-term (up to 15 years). Up to 60% of mortgaged goods and 70% of gold or bonds.
				Bank of Syria and Lebanon	7–9	
Turkey	4	7–8	Lower rate for loans below 500 liras; higher rate for larger loans.	Agricultural Bank of Turkey	5–7	

[1] Although this bank is an apex institution for the cooperative movement, about 85 per cent of its loans are financed by the Government.

TABLE 10: SOURCES OF DATA, BY AREA

AFRICA

Most of the information on the African countries in this table was drawn from W. T. Newlyn and D. C. Rowan, *Money and Banking in British Colonial Africa* (Oxford, 1954). Additional sources are as follows:

LIBYA. Conference, California.

NIGERIA. International Bank for Reconstruction and Development, *The Economic Development of Nigeria* (Baltimore, 1955).

ASIA

BURMA. ECAFE, Mobilization; Union Bank of Burma, *Bulletin* (Rangoon).

CAMBODIA. Conference, California; UN, Progress, pp. 220–22.

CEYLON. ECAFE, Mobilization.

INDIA. ECAFE, Mobilization; Reserve Bank of India, *Banking and Monetary Statistics of India* (Bombay, 1954).

INDONESIA. Conference, California; Johnson.

JAPAN. Conference, California; UN, Progress.

PAKISTAN. Ministry of Finance, *White Paper on the Budget of the Government of Pakistan for 1955–56* (Karachi, 1955); State Bank of Pakistan, *Bulletin* (Karachi), March 1954.

PHILIPPINES. Conference, California; Central Bank of the Philippines, *Annual Reports* (Manila).

THAILAND. Conference, California; ECAFE, Mobilization.

VIET-NAM. Conference, California.

LATIN AMERICA

BOLIVIA. Conference, California.

BRAZIL. Alexandre Kafka, "Brazil," in Beckhart.

CHILE. UN, Progress, pp. 220–22.

COSTA RICA and CUBA. Conference, California.

ECUADOR. Conference, California; UN, Progress, pp. 220–22.

EL SALVADOR. Conference, California; Economic Commission for Latin America, *Agricultural Credit in El Salvador* (UN Document E/CN.12/167/Add.2, New York, May 1, 1950).

HONDURAS. Conference, California.

MEXICO. Conference, California; Margaret G. Myers, "Mexico," in Beckhart.

PARAGUAY, PERU, and URUGUAY. Conference, California.

MIDDLE EAST

AFGHANISTAN. Conference, California.

EGYPT. Conference, Beirut; Johnson.

IRAN and IRAQ. Conference, California; Conference, Beirut.

ISRAEL. Conference, California; UN, Progress, pp. 220–22.

JORDAN and LEBANON. Conference, Beirut.

SYRIA. Conference, California; Conference, Beirut.

TURKEY. Johnson.

TABLE 11. MONEYLENDERS' RATES OF INTEREST[1]

(In per cent per annum)

	Lower Exceptional[2]	Usual[2]	Occasional[2]	Higher Exceptional[2]
AFRICA				
Nigeria				
(1)				500
(2)		45		150
ASIA				
Burma				
(1)	12–15	24–36	50–100	400–1,800
(2)	12–18	24–36	50–60	100–250
Cambodia		36–84	120	
Ceylon				
(1)	13.5	18–24	67	100
(2)	6	6–18	18 and above	
(3)	10–15	17–20	27–36	50
(4)				600
China				
(1)		20–30	40 and above	
(2)		24–48	72–96	100–200 and above
India				
(1)		12–50		300–400
(2)		25–50		
Indonesia		50	200	500–600
Japan	10	10–15	15–20	20 and above
Malaya			100	
Pakistan				
(1)		30		300
(2)		25–30		150
Philippines				
(1)		60–200		300
(2)		25–30	100–200	400
(3)		20		300
Thailand				
(1)		36	60	
(2)	18 and below	25–30	40–60	92
Viet-Nam				
(1)	20	36–100		
(2)		50–100	240–300	3,650
LATIN AMERICA				
Colombia		18–24	48	
Cuba				
(1)	12	24–30		
(2)	8–18	24–40		
Guatemala	8–12		100	
Haiti		100		over 100
Honduras		24–36		200–600
Mexico		60		300–1,200
MIDDLE EAST				
Egypt	15	25–40		200
Iran			200	775
Iraq				
(1)		20–50	100	
(2)		100	200–400	700
Israel				
(1)		140		
(2)		30		
(3)		18–24		
(4)		30		80–90
Jordan				
(1)		60		
(2)		20–40	exorbitant	
Lebanon				
(1)			50–100	
(2)		22–24	33	
Sudan, Northern			100	
Syria				
(1)	9–20	40–45	150	
(2)	18	40		

[1] Data refer to postwar years unless otherwise indicated in the section, "Descriptive Notes and Sources of Data, by Area," below.

[2] For description of term, see text, p. 102.

TABLE 11: DESCRIPTIVE NOTES AND SOURCES OF DATA, BY AREA

AFRICA

NIGERIA. (1) Prewar rate. Source: *Report of the Commission on the Marketing of West African Cocoa* (Cmd. 5845, London, 1938), para. 260. (2) The rate of 45 per cent is the maximum rate permissible on promissory notes under the Moneylenders Ordinance, No. 49 of 1949. Source: W. T. Newlyn and D. C. Rowan, *Money and Banking in British Colonial Africa* (Oxford, 1954), pp. 134 and 136. Newlyn and Rowan also report (p. 139) that in British West Africa as a whole rates up to 150 per cent are not uncommon.

ASIA

BURMA. (1) Prewar rates. Source: Tun Wai, *Burma's Currency and Credit* (Calcutta, 1953), pp. 53, 66, and 94–96. (2) Prewar rates. Source: Sir Bernard O. Binns, *Agricultural Credit for Small Farmers* (FAO Development Paper No. 16, Rome, 1952), p. 19.

CAMBODIA. Source: Thonni Thoutch, "On the Possibilities of Agricultural Credit in Cambodia and on the Problems Which Cambodia Must Face in Order to Ensure Adequate Agricultural Financing," in Conference, California, p. 633.

CEYLON. (1) Rates for 1934. Source: Ceylon Banking Commission, *Report* (Colombo, 1934), Vol. 1, pp. 44 and 50–51. (2) Rates for 1950–51; exclusive of hidden charges and effect of some of the malpractices. Source: Department of Census and Statistics, *Final Report on the Economic Survey of Rural Ceylon, 1950–51* (Colombo, 1954). (3) Rates for 1951. Source: Department of Census and Statistics, *Census of Financial Institutions, 1952* (Colombo, 1954). (4) Rate for 1953–54 on loans for cultivation and subsistence in the Hambantota cotton belt. Source: Cooperative Department, *Administration Report on the Working of Cooperative Societies for 1954* (Colombo, 1955), p. 15.

CHINA. (1) Prewar rates. Source: UN, Land, p. 41. (2) Prewar rates. Source: Institute of Pacific Relations, *Agrarian China: Selected Source Materials from Chinese Authors* (Chicago, 1938), pp. 188–99.

INDIA. (1) Source: ECAFE, Mobilization, p. 39. (2) Source: Reserve Bank of India, *All-India Rural Credit Survey* (Bombay, 1954), Vol. 2, pp. 173–74.

INDONESIA. The "higher exceptional" rates of 500–600 per cent are prewar. Sources: R. Sujudi, "Brief Outline of Smallholders' Agriculture in Indonesia, Especially in East Java," in Conference, California, p. 756; Mohamad Iskandar, "Summary of the Movement of Fishery Organizations in Indonesia," in Conference, California, p. 768.

JAPAN. Prewar rates; based on a survey conducted in 1912. Source: Hideo Tokoro, "Agricultural Credit in Japan," in Conference, California, p. 848.

MALAYA. Source: International Bank for Reconstruction and Development, *The Economic Development of Malaya* (Baltimore, 1955), p. 79.

PAKISTAN. (1) Source: *Report of the Pakistan Agricultural Inquiry Committee, 1951–52* (Karachi, 1953), p. 80. (2) The customary rate in the district of Gujrat was said to be 2 maunds of wheat for every Rs 100 lent. The price of wheat was about Rs 12–15 per maund; therefore the "usual" rate of 25–30 per cent. Source: Board of Economic Inquiry, Punjab (Pakistan), *Report on the Need and Supply of Credit in the Rural Areas of the Punjab* (Lahore, 1951), p. 31.

PHILIPPINES. (1) Prewar rates. Source: Jacoby, p. 188. (2) Sources: UN, Progress, p. 213; Conference, California, p. 471. (3) Source: Agricultural Credit and Cooperative Financing Administration, *Annual Report, Fiscal Year 1953–54* (Manila, 1955), p. 1.

THAILAND. (1) Source: Chamnian Saranaga, Chesada Chongchitara, and Songsang Bhindhuvatana, "Rural Cooperative Credit in Thailand," in Conference, California, p. 977. (2) Rates for 1952–53. Source: Ministry of Agriculture, *Thailand Economic Farm Survey, 1953* (Bangkok, 1953).

VIET-NAM. (1) Prewar rates. Source: Jacoby, pp. 147–48. (2) The "higher exceptional" rate of 3,650 per cent is based on extremely small daily loans at 10 per cent per day. Sources: UN, Progress, p. 26; Nguyen Quang Luu, "Some Aspects of the Problem of Agrarian and Cooperative Credit in Viet-Nam," in Conference, California, p. 1015.

LATIN AMERICA

COLOMBIA. Data relate to rates on mortgages in the general area of Bogotá. Sources: Superintendencia Bancaria, *Informe, 1954* (Bogotá, 1955), p. 22; Departamento Administrativo Nacional de Estadística, *Boletín Mensual de Estadística* (Bogotá), February 1956, p. 104.

CUBA. (1) Source: Digby Solomon Espinosa, "Agricultural Credit in Cuba," in Conference, California, p. 650. (2) Source: Philip J. Glaessner and G. Sterling Grumman, "Cuba," in Beckhart, pp. 210 and 215.

GUATEMALA. Source: Economic Commission for Latin America, *Agricultural Credit in Guatemala* (UN Document E/CN.12/167/Add.3, New York, May 1, 1950), pp. 17 and 20.

HAITI. Source: United Nations, *Domestic Financing of Economic Development* (New York, 1950), p. 80, n. 44.

HONDURAS. The "higher exceptional" rates of 200–600 per cent are based on the fact that the lender was allowed to purchase the crop at one-fourth to one-half the price that would prevail at harvest and on the assumption that the loan was for six months. Source: Rene Cruz, "Agricultural Credit in Honduras," in Conference, California, p. 715.

MEXICO. Sources: Wendell C. Gordon, *The Economy of Latin America* (New York, 1950), p. 47; Margaret G. Myers, "Mexico," in Beckhart, p. 578.

MIDDLE EAST

EGYPT. Prewar rates. Source: Mohamed El Said Mohamed and Mahmoud El Shafie, "Development of Farm Credit System in Egypt," in Conference, California, pp. 660 and 665.

IRAN. Sources: "Journal of Conference," p. 6, and Economic Research Institute, "Report on Agricultural Credit in Iran," p. 8, in Conference, Beirut.

IRAQ. (1) Source: Hasan Thamer, "Problems of Agricultural Credit in Iraq," in Conference, California, pp. 798–99. (2) Sources: "Journal of Conference," p. 6, and Economic Research Institute, "Report on Agricultural Credit in Iraq," p. 15, in Conference, Beirut.

ISRAEL. (1) Prewar rate. Source: Yehuda Lowe, "Agricultural Credit in Israel," in Conference, California, p. 803. (2) Prewar rate. Source: UN, Land, p. 38. (3) Source: Department of Commerce, *Basic Data on the Economy of Israel* (World Trade Information Service, Part I, No. 55–104, Washington). (4) Rates for 1955. Source: *The Israel Economist* (Jerusalem), December 1955.

JORDAN. (1) Source: Zaki Abdo, "Agricultural Credit in Jordan," in Conference, California, pp. 887–88. (2) Sources: "Journal of Conference," p. 6, and Economic Research Institute, "Report on Agricultural Credit in Jordan," p. 14, in Conference, Beirut.

LEBANON. (1) Source: Joseph Abi-Fadel, "Agriculture and Agricultural Credit and Cooperatives in Lebanon," in Conference, California, p. 903. (2) Source: Economic Research Institute, "Report on Agricultural Credit in Lebanon," pp. 11–12, in Conference, Beirut.

SUDAN, NORTHERN. Source: Martin W. Wilmington, "Aspects of Moneylending in Northern Sudan," *The Middle East Journal* (Washington), Spring 1955, p. 142.

SYRIA. (1) Prewar rates. Source: UN, Land, p. 38. (2) Source: Economic Research Institute, "Report on Agricultural Credit in Syria," p. 8, in Conference, Beirut.

The 1954-55 Improvement in Japan's Balance of Payments

P. R. Narvekar*

DESPITE THE WEAKNESS caused by structural and other reasons, Japan had a surplus in its over-all balance of payments[1] in every year from 1947 through 1952. The year 1953, however, was conspicuously different and attracted special attention. The exceptional nature of this year was heightened by the fact that special government receipts, which had enabled Japan to accumulate reserves since 1950,[2] despite large deficits in other balance of payments items, were then at a peak. In 1951 and 1952, when special government receipts averaged $706 million a year, Japan had an average annual payments surplus of about $281 million. During 1953, on the other hand, when such receipts totaled $803 million, there was a payments deficit of $227 million.

The payments difficulties in 1953 were dramatized by the fact that they were in the form of a sterling crisis. The decrease in exchange assets was all in sterling assets, which reached critically low levels by the middle of 1953. An increased use of import usance (i.e., time) bills facilities made available by London banks helped Japan husband its meager sterling resources. Japan also entered into swap arrangements with these banks, buying sterling for dollars and undertaking to resell it, after a specified period, for dollars. Furthermore, in a total of four transactions between September 8 and December 21, 1953, Japan purchased the sterling equivalent of $124 million from the International Monetary Fund.[3] However, this symptom of the problem—the sterling crisis—will not be emphasized in this paper, since, basically, the disequilibrium enveloped the whole range of Japanese payments. It showed up specifically as a sterling problem because Japanese efforts to conserve dollars by buying more from the sterling (and other non-

* Mr. Narvekar, economist in the Far Eastern Division, is a graduate of Bombay University and of Columbia University.

[1] Goods and services, donations, and capital movements other than changes in reserves and related items.

[2] Between 1947 and 1950 the increases in reserves were due to large receipts of aid from the United States.

[3] However, before making the fourth purchase, equivalent to US$61.6 million, Japan repurchased ¥ 22.2 billion from the Fund with a payment of US$61.6 million. Its net purchases of foreign currency therefore did not exceed $62.4 million, and Fund holdings of yen did not exceed the Japanese quota. In 1955, Japan repurchased yen from the Fund by the payment of U.S. dollars to restore Fund holdings of yen to 75 per cent of the Japanese quota.

dollar) countries coincided with the imposition of restrictions on the importation of Japanese goods by many of these countries. The precise nature of the payments problem facing Japan in 1953 is discussed below in Part I; both the structural causes of the difficulties and the causes originating in the domestic financial conditions are studied.

Faced with the problem, the Japanese authorities moved late in 1953 to apply a brake to the domestic economic expansion and to discourage imports. The precise measures taken are outlined below in Part II, and the effects of these measures are analyzed in Part III. The payments situation changed strikingly by 1955, and during that year Japan had a surplus of $345 million despite the fact that the special government receipts declined considerably. The fact that this improvement coincided roughly with the inauguration of a domestic disinflationary policy suggests an important causal role for the latter; but this role cannot be easily disentangled from other factors operating either domestically or in the outside world. An attempt will be made to ascertain the extent to which domestic financial policies could be credited with the improvement in the payments situation.

The experience of these years is of topical significance because, largely as a result of an investment boom of substantial dimensions, the payments surplus was again wiped out in 1956 and, according to press reports, a draft of $496 million was made on reserves in the first six months of 1957. Once again the authorities are seeking to handle the situation by relying principally on internal financial measures.

I. Nature of Payments Problem in 1953

Deterioration of payments position

With a deficit of $227 million in 1953, Japan's payments position in that year showed a net deterioration of about $419 million. The deterioration was almost entirely on trade account, as there was a sharp increase in the volume of imports. The import purchasing power of Japanese exports[4] actually increased by about 13 per cent between the two years, export prices falling by 7 per cent and import prices by 10 per cent, while the volume of exports increased by 8 per cent. But the volume of imports increased by as much as 35 per cent, and the trade deficit widened from $412 million in 1952 to $792 million in 1953.

The expansion of imports in 1953 can be attributed primarily to an inflated domestic demand; the satisfaction of this demand was facili-

[4] Defined as the product of the terms of trade index and the export volume index; see Table 3.

tated by an official policy of liberalizing and even encouraging imports, especially from the sterling area and countries with which Japan had bilateral clearing accounts. The importance of the inflated home demand is strongly indicated by the fact that imports of practically all commodities increased; items which on an individual basis are quantitatively unimportant were responsible, when considered as a whole, for most of the total increase. There were also instances—e.g., coal and rayon pulp—in which imported commodities were substituted for domestically produced goods because of favorable prices for the imports. But import policy had a more positive role than merely an enabling one, since a liberalization of imports after a period in which import restrictions were, in general, effective would lead to greater imports even without an increase in home demand. Moreover, the official policy was to encourage imports by providing import trade with preferential treatment—relative to domestic trade—in regard to bank financing.

Exports in 1953 were slightly smaller than in 1952. The proportion of total output of principal commodities that was taken by home demand seems to have increased during the year. Despite severe import restrictions, principally against textiles by certain sterling countries, Japan succeeded in increasing the volume of its textile sales, but not sufficiently to offset the fall in prices and add to exchange earnings. Exports of metals and metal products declined sharply, as there was no longer an abnormally favorable demand for Japanese steel such as had existed in 1952 as a result of the U.S. steel strike superimposed on a generally tight steel supply position. Data collected by the Japanese authorities show that Japanese prices of metal products and machinery were higher than those of its principal trade competitors.

Structural Changes

The impact of certain structural changes, affecting both the demand and the supply schedules of foreign exchange, has been of major significance as a cause of Japan's payments difficulties throughout the postwar years. Therefore it cannot be a sufficient explanation of the 1953 crisis but merely indicates the limitations to the efficacy of disinflationary policy as a solution to the payments problem.

The war did extensive damage to the productive capacity of the country. It has been estimated that about 25 per cent of the total national nonmilitary assets were destroyed; the damage to industrial equipment ranged up to well over 50 per cent in certain lines of power, machinery, and chemical industries.[5] In 1947 industrial production was

[5] S. Tsuru, *Japan's Economy—Present and Future* (Tokyo, Japan Institute of Pacific Relations, 1950), pp. 4–5.

less than 40 per cent of the prewar volume, and exports were only 5 per cent of those in prewar years. The tonnage of the Japanese merchant marine, which before the war was the third largest in the world and carried well over half of Japan's own trade and a substantial portion of trade between other countries, was reduced by 80 per cent. The balance on account of international transportation became adverse and was an important debit item in the balance of payments.

During the years since the war, several changes have occurred relating both to Japan's sources of import supplies and to its export markets. Nearby sources of imports in prewar years have been lost because of the loss of colonies and other territories under Japan's control. Before the war, empire countries[6] provided about one third of Japan's total imports and most of certain essentials, such as rice, soybeans, sugar, and coking coal. Since the war, Japan has been shopping in far distant markets—e.g., in South Asia and even North America for rice and also in North America for metallurgical material.[7] Success in efforts to obtain imports from nearer sources has had to wait upon the emergence of alternative sources of supply and has, therefore, been recent and limited.[8] The important export markets of Mainland China and Korea, which before the war took about one third of Japan's total exports, are now practically closed for political reasons. Moreover, in the immediate prewar years, Japan had suffered a sharp reduction in the world demand for its exports of raw silk and silk fabrics, and it has also been faced with the declining importance in world trade of its principal export product, cotton textiles.[9]

With the passage of time, the Japanese economy has been gradually adjusting itself to the changed structural environment, but the adjustment was by no means complete in 1953. The kind of adjustment that has been taking place consists principally of reducing the import content of both domestic consumption and exports. In recent years, the emphasis of industrial and export policy has been to concentrate on the metal, engineering, and chemical industries—industries that require much smaller inputs of imported materials than do textiles; within the textile industry, the emphasis has been on synthetic fibers. Compared

[6] Korea, Kwantung, Manchuria, and Taiwan only. Other empire countries and leased and mandated territories are excluded. The figure relates to 1937–38.

[7] This reliance on the dollar area for essential imports is a partial explanation of Japan's "dollar problem" in the postwar years, which has been veiled, of course, by special government receipts, which are almost entirely in the form of U.S. dollars.

[8] For example, raw cotton purchases are being shifted from the United States to India and Pakistan, iron ore to India and Malaya, and rice to Southeast Asia.

[9] H. Tyszynski, "World Trade in Manufactured Commodities, 1899–1950," *Manchester School of Economic and Social Studies* (Manchester), Vol. 19 (1951), pp. 272–304.

with prewar output, the production of chemicals, machinery, and metals and their products has increased much more than has the production of textiles. The increased production of heavy industries and chemicals has enabled Japan to reduce certain imports—some types of machinery, sulphuric ammonia, pig iron, glass, pulp, etc. These developments, together with the recent tendency toward increased domestic demand for artificial, rather than natural, fiber fabrics produced domestically and for durable consumer goods, and the increased consumption of services, are partial explanations of the fact that in the postwar years Japanese imports have amounted to only about 12 per cent of gross national expediture, compared with about 20 per cent before the war.

During the protracted period of adjustment to the unfavorable structural changes, Japan has been helped by special government receipts, which accrue principally as reimbursements for the cost of supporting the UN Korea forces stationed in Japan, from sales to the UN forces under the special procurement program, from U.S. expenditures for the maintenance of its forces in Japan since the peace treaty, and from offshore procurements by the United States, through its International Cooperation Administration, for third countries. Despite large deficits in the rest of the current account, these receipts have, since 1951, either made possible an increase in reserves or, as in 1953, mitigated a decline in them. Although the receipts have not tapered off as rapidly as was originally expected, they are essentially temporary in nature. To only a very small extent, however, are they aid receipts. It is possible that the United States, in making its disbursements, gave some consideration to Japan's need to increase its exchange earnings; and there was also the fortuitous circumstance of Japan's proximity to the theater of operations, Korea. However, this supply of exchange, unlike aid receipts, does involve a corresponding demand on Japanese resources. At the time that this demand originally emerged, there was considerable slack in the Japanese economy; at present, on the other hand, it is not improbable that a substantial reduction in these earnings would increase regular Japanese exports.

Price disparity and inflation

In July 1953, the Japanese Economic Counsel Board[10] said, "Two domestic factors hinder an increase in exports at present. They are the comparatively high prices of heavy and chemical industry products and the expansion of domestic consumer purchasing power."[11] Although

[10] The Economic Counsel Board, known earlier as the Economic Stabilization Board and at present as the Economic Planning Board, is a Department of the Japanese Government.

[11] Economic Counsel Board, *Economic Survey of Japan, 1952–53* (Tokyo, 1953), p. 25.

this statement relates, on the external side, only to exports, and, on the internal side, only to consumer expenditures, it emphasizes well the two immediate causes of Japan's payments difficulties in 1953: price disparity and an inflated domestic demand.

Attempts in the immediate postwar years to check inflation by increasing production were abandoned, with the adoption of the now famous Dodge Stabilization Plan, in favor of attempts to increase production by checking inflation.[12] These took the form principally of securing a balance in fiscal transactions, and it is generally agreed that they were eminently successful in checking inflation for the first time since the end of the war. Although international price comparisons without the benefit of a base period are notoriously difficult, the Japanese authorities believed that immediately before the Korean war Japanese prices were at least 10 per cent below the international level.[13]

With the outbreak of the war in Korea, rising world demand for Japanese goods—in the form of both exports and special government receipts—sharply spurred industrial activity. Price increases originated among goods in the export and import categories, but they gradually spread through the rest of the economy, especially since private investments also were stimulated. The increases in both wholesale prices and export prices considerably exceeded those of Japan's principal trading competitors. "The number of commodities priced above the international level gradually increased."[14]

World demand receded after the spring of 1951, and the upward movement in Japanese industrial production and in wholesale prices virtually disappeared. Although some bankruptcies and distress selling did occur, the downward adjustment of the economy was neither especially sharp nor prolonged, because of the cushioning effect of an increase in 1951 in private fixed capital expenditures. Furthermore, substantial wage increases and tax reductions effected toward the end of 1951 and in early 1952 resulted in a sharp rise in consumer spending in 1952; and government purchases of goods and services also increased during the year. As a result, the Japanese economy expanded at a very rapid rate, gross national product increasing by 10 per cent in real terms. The expansion continued into 1953 when, in addition to a further stimulus given to consumer demand by another round of wage increases and tax reductions, a sharp upsurge in domestic investment occurred.

[12] See E. C. Hutchinson, *Inflation and Stabilization in Postwar Japan* (Ann Arbor, University Microfilms, 1954).

[13] Economic Stabilization Board, *Economic Survey of Japan, 1951–52* (Tokyo, 1952), pp. 68 and 80; Economic Counsel Board, *Economic Survey of Japan, 1952–53* (Tokyo, 1953), p. 110.

[14] Economic Stabilization Board, *Economic Survey of Japan, 1950–51* (Tokyo, 1951), p. 8.

In that year, gross fixed capital investment increased by 27 per cent in real terms. Industrial activity was 22 per cent above that in 1952.

Although supported by a substantial increase in imports, such a rapid pace of growth for two consecutive years could not help but generate inflationary pressures. Despite the higher imports, there was a sharp fall in raw material inventories relative to the rate of their utilization. Shortages of labor, in the aggregate, are unimportant in an economy like Japan's with considerable disguised unemployment. Increasing demand was evidenced, however, by an upward movement in the employment index—which in Japan moves with considerable sluggishness—a decline in the ratio of new applicants to new job openings, a lengthening of hours of work, and a reduction in the number of unemployed (indicated by an official sample survey). Commercial bank credit to the private sector increased by 40 per cent in 1952 and by 26 per cent in 1953, and the money supply by 21 per cent and 14 per cent. Domestic wholesale prices, influenced by the downward pull of export and import prices, declined slightly in 1952, but in 1953 they pushed upward, even as import and export prices fell.

What can be said about the competitiveness of Japanese exports in these years? During the active period resulting from the Korean war, Japan's average export prices, as mentioned earlier, rose by a greater extent than did those of its competitors. In 1952, Japan largely corrected its position, and it made a further slight gain in 1953 (see Table 5). Export prices as indicators of competitiveness suffer, however, from the important drawback that they are affected by foreign demand conditions. The fall in Japanese export prices in 1952—while those of its competitors increased slightly—was due principally to the fact that, in that year, world trade was most depressed in textiles, which are of greater importance among Japanese exports than among those of its competitor countries. It appears that Japan was not competitive, either in 1950 or in 1953, in respect of metal products, machinery, and other heavy industry products. The reasons for this do not, of course, lie entirely in the accumulated effects of past inflation. There is, in addition, the disadvantage of having to import from distant sources a large proportion of metallurgical raw materials. Also, the cost of domestically mined coal is high, since Japanese seams are narrow, uneven, and broken, and miners have had to contend increasingly with the problem of ground water.

Special credit facilities for import trade

The practice of according preferential financial treatment to imports originated with the emergence of an urgent demand for imports of raw materials during the period following the outbreak of the Korean war.

Such treatment was especially necessary because, after World War II, private trade had been resumed only at the beginning of 1950, and the international credit standing of Japanese exchange banks had to be strengthened. Several changes were made during 1950–53 in the import finance arrangements—some of them to favor imports from one currency area relative to those from another; it should suffice, however, to give here only a broad outline of the system as it was immediately prior to October 1953 when the Bank of Japan took measures to curtail credit.

Under the "special foreign exchange loans" system, the Bank of Japan provided yen currency to commercial banks at preferentially low interest rates in order to finance the settlement of import bills when they became due;[15] the commercial banks could in turn extend the low interest rate credit to the importers. Under the same system, the Bank also gave foreign exchange loans to commercial banks to finance the marginal deposits that they were required to make in order to obtain confirmation of their letters of credit from foreign banks. Second, import bills, like first-class domestic bills and export bills, were eligible for rediscount by the Bank of Japan and thus entitled to the lowest interest rates of the Bank; also, like export bills, they were exempt from the application of the progressive interest rates system. Third, the financial facilities provided for imports extended beyond the transaction of importation per se, especially under the "stamped bills" system, i.e., the system under which the Bank of Japan stamps certain bills acknowledging their high priority. Bills eligible to be stamped in this way were not only those covering payments for freight and insurance, but also those covering funds required by producers for taking delivery of imported goods from importers. The result of all these arrangements was to make the financing of imports very easy and thus to mitigate, to some extent, the disinflationary impact of imports.

II. Policy Measures to Correct Payments Disequilibrium

The measures taken by the Japanese authorities to cope with the payments problem fall broadly into three categories. First, the deficit itself was attacked by intensifying the degree of restriction on imports. Second, the special financial facilities granted for the import trade were withdrawn. Third, a program of disinflation was launched as the authorities were impressed by the close relationship between external and internal disequilibrium.

[15] Thus these were, in fact, loans in domestic currency although they were called foreign exchange loans.

Tightening of import restrictions

Import control is exercised in Japan by requiring, for all imports, individual licenses which are granted within the framework of an exchange budget prescribing, semiannually, expenditures for imports and invisible payments. From October 1953—the beginning of the second half of the 1953–54 fiscal year—import restrictions were tightened on a selective basis. The budgetary allocations for imports of luxuries and nonessentials were sharply curtailed, but those for imports of industrial raw materials needed for export industries and of machinery and equipment necessary for the rationalization of industry were, in general, maintained. Nevertheless, total allocations for that semiannual period exceeded those of the corresponding period of the previous year by about 5 per cent, as imports of foodgrains—which are seasonally concentrated in the October-March period—had to be increased because of the poor domestic crops in 1953. For the subsequent budget period, however, total allocations were reduced by about 10 per cent.

In addition to the reduction in the size of the over-all exchange budget, the control over imports was tightened by reducing the scope of the automatic approval system of licensing under which licenses for certain commodities are granted automatically at the bank level. The amount of exchange allocated for imports under this system as a proportion of total allocations was halved as between the first half of the fiscal year 1953–54 and the first half of 1954–55.

With a view to checking speculative imports, the percentage of the import invoice value which importers are required to deposit with banks at the time of applying for import licenses was raised, and the permission to fulfill this deposit requirement in terms of a bank letter of guaranty, instead of in cash, was also withdrawn.

Reduction of special credit facilities for imports

By a series of measures taken between October 1953 and April 1954, the Bank of Japan either reduced or totally withdrew the preferential arrangements for import financing. The special foreign exchange loans of the Bank of Japan were first restricted to a small number of import items, and their term was shortened; later, the loans were discontinued. Rediscounts of import bills by the Bank were first restricted to essential items only; subsequently, these bills ceased being eligible for rediscount and became eligible only as collateral for loans on which higher rates are charged, and the terms of these loans were shortened. The number of commodities eligible for stamped-bill privileges was reduced, and the terms of the bills were shortened. Further, the Bank

discontinued the stamping of bills covering payments of expenses for freight and insurance on imports and funds needed by domestic producers to take delivery of imported goods from importers.

Program of disinflation

Monetary policy

In October 1953, the Bank of Japan inaugurated a tight money policy. Long before this date, the authorities had been aware of the role of commercial bank credit in strengthening the inflationary pressures. In the latter part of 1951, the Ministry of Finance issued directives to the commercial banks, urging restraint in credit policies and cooperation in channeling funds toward essential industries. The Voluntary Credit Control Committee, composed of representatives of commercial banks, also called upon banks to restrict nonessential loans. These appeals were largely ineffective, however, principally because access to the Bank of Japan remained easy: the lending rates of the central bank were generally lower than lending rates of commercial banks. Credit expansion continued at a rapid pace; as mentioned earlier, commercial bank credit to the private sector increased by ¥ 566 billion, or 40 per cent, in 1952 and by a further ¥ 521 billion, or 26 per cent, in 1953. This expansion was based on liberal support from the Bank of Japan, whose loans to banks increased sharply in 1953.

Apart from renewed efforts to persuade banks to observe restraint in lending, the principal restrictive measure taken by the Bank of Japan in October 1953 was to increase the cost of central bank credit. This choice of the interest rate instrument was only logical, since the banks were heavily in debt to the Bank of Japan. They had practically no reserves that could be immobilized with a stroke of the pen: there were no reserve requirements, legal or conventional, in Japan, and the banks have, in recent years, operated with cash holdings of less than 2 per cent.[16] These circumstances, together with the unattractiveness of government securities in comparison with other earning assets of banks and the absence of a suitable securities portfolio with the Bank of Japan, also ruled out the possibility of open market operations.

In its interest rate policy, the Bank of Japan differentiates between banks and also between the types of asset offered by them. Definite lines of credit are established for each bank in accordance with a formula that takes into account several factors, such as the magnitude and nature of the bank's own funds, the nature of its assets, and the magnitude of its previous borrowing from the Bank. The formula is

[16] Legislation empowering the financial authorities to introduce a system of cash reserve requirements for banks was enacted in May 1957. However, the system has not yet been put into effect.

applied uniformly to all banks but contains some elements which permit a degree of discretion to the Bank of Japan. The basic bank rate applies to only an initial portion of the credit line. A somewhat higher rate, the "first higher rate," is applied to borrowings above this amount, but within the credit line; and a much higher rate, the "second higher rate," is applied to further borrowing.[17] At each of these levels, different rates are charged for different types of eligible asset.

In the process of credit restriction, the authorities wished to avoid pushing up the general level of interest rates, which was considered to be too high relative to world levels, and thus affecting adversely the competitive position of Japanese exporters. Therefore, the basic bank rate, which had been 5.84 per cent[18] since October 1951, was not changed. On the other hand, the range of the credit lines to which the basic rate applied was narrowed, and the higher rates were raised. The resulting increase in the cost of central bank credit is indicated by the increase—from 6.42 per cent in the first half of 1953 to 7.90 per cent in the first half of 1954 and to 8.01 per cent in the second half[19]—in the average rate on all advances and discounts by the Bank of Japan to commercial banks. Even at the higher level, the average rate was lower than most rates on loans and discounts of commercial banks. But credit restriction was enforced by the fact that the proportion of borrowing from the central bank that fell under the higher rates increased; in addition, at the levels to which they had been raised, the second higher rates exceeded the legal maxima on commercial bank lending rates on the corresponding types of asset.[20]

The rise in the cost of central bank accommodation was not followed by any substantial stiffening of the lending rates of banks, principally because their actual rates had already reached legal limits. It is difficult to give a precise idea of the changes in the rates on loans and advances because of the variation that obtains between them; but it appears that there was a very mild hardening of the average rates on advances. The actual rise was slight: from 8.96 per cent in October 1953 to 9.04 per cent in December 1954. There was, however, a distinct reversal in the trend of this rate; after declining throughout 1952 and until October 1953, the rate rose gently thereafter.

[17] These "higher rates" were consolidated in a single rate in March 1957.

[18] The bank rate is quoted in Japan in terms of sen (one hundredth of a yen) per day. The rate of 5.84 per cent is converted to an annual basis from 1.6 sen per day.

[19] From the *Oriental Economist* (Tokyo), March 1956, p. 115.

[20] Maximum limits for rates on commercial bank loans are fixed by law; but loans of less than ¥ 1 million or for periods longer than a year are exempt from regulation. In June 1954, the second higher rate of the Bank of Japan for the rediscount of first-class commercial bills was 8.39 per cent, while the commercial bank rate for discounting them was 8.03 per cent or less.

The reduction in the pace of credit expansion during 1954 cannot be attributed to the reaction of the ultimate borrower to the higher cost of credit. Rather, it seems to have been brought about by the rationing of credit imposed by the commercial banks, that is, by widening the fringe of unsatisfied borrowers. The inducement to introduce credit rationing did not have to come—as it does in some other banking systems—indirectly, via a depreciation in the value of securities as a result of the rise in interest rates; the expansion of loans and advances by the commercial banks did not depend upon a shift from security holdings, but it was fed by Bank of Japan resources. The inducement was therefore provided more directly by a squeeze on the commercial banks' profit margin, which resulted from the contraction or even elimination of the gap between the Bank of Japan lending rates and the lending rates of the commercial banks. Also important in inducing banks to ration credit were the directives from the authorities to restrict credit expansion. These directives emphasized the need for selectivity in the rationing of credit, if the long-run aim to rationalize and modernize the industrial structure was not to be jeopardized during the process of achieving the shorter-run objective of monetary stabilization.

The results, in terms of the reduced pace of credit expansion, were striking. During 1954, the first complete year following the adoption of the restrictive measures, outstanding loans and advances of the Bank of Japan to the commercial banks declined by ¥ 56 billion, in contrast to the increase that had occurred in every year of the postwar period. Outstanding commercial bank loans and advances to the private sector increased by ¥ 250 billion, or by 10 per cent, during 1954. This was the smallest increase, both absolute and relative, in the postwar period.

Fiscal policy

The adoption of an austerity budget for the fiscal year beginning April 1, 1954 constituted the fiscal side of the disinflationary policy. Japanese budgetary procedures are complex and do not lend themselves to simple explanation in familiar terms. In addition to the General Account budget (corresponding roughly to revenue), there are Special Account budgets for foreign exchange transactions that are conducted by the banking system on government account, receipts and expenditures of welfare insurance, postal savings, foodstuffs control, etc. There are also budgets of government agencies, such as the National Railways, the Japan Development Bank, and the Export-Import Bank of Japan.

The element of austerity in the 1954–55 budget consisted principally in a sizable cut in the investment program of the Government. Apart

from its own investment expenditures and those of government agencies, the Government has had to provide, in the postwar years, large sums of investment funds to the private sector. Important sources of these funds have been postal savings, postal life insurance funds, counterpart funds of U.S. aid and U.S. surplus agricultural products purchased for yen currency, and current revenues of the General Account. They are entrusted principally to the Trust Fund Bureau and the Industrial Investment Special Account to be channeled through institutions like the Development Bank, the Power Resources Development Corporation, the Export-Import Bank, the Housing Corporation, and the Agriculture, Forestry, and Fisheries Finance Corporations. These institutions also raise small amounts from the public by the issue of bonds, etc.

In the 1954–55 budget, the investment funds budgeted for the private sector, at ¥ 146 billion, were 17 per cent less than in 1953–54; and investments of government enterprises—principally of the National Railways—were reduced by about 22 per cent, to ¥ 26 billion. Outlays on public works, welfare projects, etc., however, at ¥ 195 billion, were about the same as in 1953–54.

In the General Account budget, the austerity consisted only in leveling off expenditures which had been rising steadily throughout the postwar years. In accordance with an official slogan to confine General Account expenditures within the limits of a trillion yen, these expenditures were budgeted at ¥ 999 billion, or about 3 per cent less than in the previous year. The small size of the reduction was due to the need to budget larger outlays for defense, reparations, and social welfare—the last, in part, in order to take care of the hardships caused by the disinflationary measures. The net reduction in total expenditures was secured by effecting economies in administrative and general expenditures and by curtailing loans and investments.

On the revenue side of the General Account budget, levies on luxuries and nonessentials, such as liquor, gasoline, sugar, and playing cards, were raised. However, their contribution to revenue was more than offset by increases in various exemptions from the income tax, viz., the basic exemption, the exemption for dependents, the exemption for life insurance premiums, and the exemption of a portion of the export income from the corporation tax; the tax on interest on deposits was also reduced. On net balance, the proposed revenues were 3 per cent less than in the previous year, and the General Account budget was balanced at ¥ 999 billion. It is clear that, while some of the tax measures may have restrained private consumption or encouraged savings, others may have tended in the opposite direction.

Despite the cuts in investment and other types of expenditure, cash

TABLE 1. CASH TRANSACTIONS OF THE JAPANESE GOVERNMENT WITH THE PUBLIC, FISCAL YEARS BEGINNING APRIL 1, 1950–55[1]

(In billions of yen)

	1950–51	1951–52	1952–53	1953–54	1954–55	1955–56
General Account	116.6	224.3	193.7	141.5	43.3	61.3
Special Accounts other than Food Control Account[2]	—73.9	—90.7	—78.9	—153.2	—168.9	—61.2
Food Control Account	57.9	—20.8	—66.1	—71.7	5.7	—106.9
Total	100.6	112.8	48.7	—83.4	—119.9	—106.8

Source: Bank of Japan, *Economic Statistics of Japan, 1956* (Tokyo, 1957).

[1] The table excludes cash transactions of the Foreign Exchange Special Account, on account of which purchases and sales of foreign exchange are made by the banking system. No sign indicates excess of receipts over payments, and minus sign indicates excess of payments over receipts.

[2] Include accounts of government agencies, such as public corporations, the Japan Development Bank, and the Export-Import Bank of Japan.

transactions of the Government added more to monetary circulation in this austerity budget year (1954–55) than in the preceding year. Cash transactions of the Government with the public on all accounts other than the Foreign Exchange Special Account—which is excluded because it represents the domestic monetary effect of international transactions, which are quite distinct from other fiscal transactions—resulted in excess disbursements almost one and a half times the excess in 1953–54 (Table 1). Authorities have attributed this principally to the disbursement during 1954–55 of appropriations made during 1953–54.

DEVELOPMENTS IN FINANCIAL POLICY THROUGH 1955

The monetary situation eased considerably during 1955. The supply of funds increased as a result of an improvement in the foreign payments situation and the large net cash disbursements that followed the official purchases of the bumper food crops of 1955. The increase in the demand for funds, on the other hand, was not commensurate and, although bank credit increased by about 20 per cent, there was a sharp contraction—of about 85 per cent—in commercial bank indebtedness to the Bank of Japan. The monetary ease induced a gentle downward drift in interest rates, which was encouraged by the authorities. The purpose was not to encourage credit expansion, but to bring the level of Japanese rates closer to world levels; the authorities remained watchful lest inflationary pressures should arise during this process. The reduction did not prove dangerous, as domestic demand was not active over the greater part of 1955.

As the reliance of the commercial banks on the Bank of Japan declined, the structure of higher rates applied by the Bank became largely inapplicable. Therefore, on August 10, 1955, the Bank raised its basic rate from 5.8 per cent to 7.3 per cent and, by making offsetting changes in the higher rate structure, kept the average rate unchanged.

By the time the 1955–56 budget was framed in the early part of 1955, the inflationary trends in the economy had definitely disappeared. Nevertheless, the budgetary authorities continued to be cautious, although they did increase the supply of investible funds to the power industry, housing, and machinery for export, and also, to a smaller extent, the investment outlays of government enterprises. These increases, however, seem to have been based at least in part on the availability of a new source of funds—the proceeds from the sale of U.S. surplus agricultural commodities. The General Account budget was again balanced at approximately the level of the previous year, although there was some increase in the welfare type of current expenditure. Taxation policy continued unchanged as taxes on luxuries and nonessential goods were raised further; offsetting the gains from these taxes were additional concessions—on the one hand, for the purpose of encouraging savings and, on the other, for relieving the pressure on low-income classes.

Judged from the standpoint of their monetary impact, however, budgetary transactions once again resulted in net cash disbursements almost as large as in the previous year. But this was due to a large excess of disbursements over receipts under the Food Control Special Account resulting from heavy purchases of foodgrains from the bumper crops of 1955. Fiscal transactions other than on the Food Control Special Account were, in fact, in approximate balance during 1955–56.

Appraisal of the disinflationary program

It must be concluded that the fiscal policy aspect of the disinflationary program of 1953–55 was not, in general, as rigorous as the monetary policy aspect. Judged from cash transactions, as well as the nature of tax adjustments and types of expenditure, fiscal policy did not lend additional support to the effort at disinflation. The progressive increase in the inflationary impact of fiscal transactions that was occurring in the immediately preceding years was checked, but a disinflationary force in a positive sense was not provided. This was due in part to the disbursement, during this period of austerity, of appropriations made during an earlier period and for which commitments probably had already been made. Moreover, it seems that, as a practical matter, the authorities did not consider it possible that fiscal policy

could play a more positive role than that of being neutral in times of inflation. The burden of taxation was already considered too high, and the lower-income classes had to be granted relief. On the expenditure side also, increasing demands for defense and welfare had to be considered. Investment outlays were reduced. It could, perhaps, be argued that these reductions should have been greater, in order that the burden on monetary policy should not be excessive, but a judgment on this question would require a much more detailed study. It may be remarked, however, that the types of investment that the public authorities undertake—especially in Japan, where the public sector is relatively small—or for which they provide funds to the private sector, are more likely to be in the upper rungs of the scale of necessities of the community; for this reason, they are likely to be spared too severe a retrenchment. The balance between various elements of a disinflationary program is ultimately a matter of national choice, based on considerations which may, in part, be noneconomic.

A related aspect of the question of the balance in financial policy concerns the relative sacrifice required of consumption demand and investment demand. In Japan, as in most instances, the attack was primarily on investment. This is indicated by the more rigorous use of monetary policy; within the field of fiscal policy, also, the emphasis was on pruning investments.

The reasons why any effective program, which is designed to correct conditions wherein domestic demand runs substantially ahead of available resources, must impinge largely on investment expenditures[21] apply with special force to Japan. First, investment demand is more autonomous than consumption demand—at least private consumption demand—and is less constrained by the necessity of living within incomes. This is especially true in Japan where, on the one hand, industry relies heavily on the banking system and the Government for investment funds and, on the other, consumer credit has not been well developed. Second, so long as mobility of resources remains less than perfect, it is probably expedient to curtail expenditures on the types of good of which exports would move faster if the pull of domestic demand were to be relaxed. Third, on the scale of necessities, investment comes only after several items of expenditure which, especially in a relatively low-income country like Japan, form the bulk of consumption expenditures. The need to rationalize the industrial structure and to modernize production processes may be great in Japan, but this is essentially a long-term need of which the fruits are available only to posterity.

[21] See Ragnar Nurkse, "The Relation Between Home Investment and External Balance in the Light of British Experience, 1945–55," *Review of Economics and Statistics* (Cambridge, Mass.), Vol. 38 (1956), pp. 121–54.

III. Output, Absorption, and External Balance, 1954-55

Improvement in the Balance of Payments

The Japanese balance of payments improved sharply from about the spring of 1954. In that year, the payments deficit contracted by $211 million, to $16 million, and in the following year there was a surplus of $345 million. The improvement, amounting in the net to $572 million, appears all the more remarkable since it occurred even as special government receipts contracted by about $300 million (Table 2).

The improvement was largely in the merchandise trade account, for which the deficit in 1955 was less than 10 per cent of that in 1953. Exports increased by $353 million, or 28 per cent, in 1954, and by $395 million, or 25 per cent, in 1955. Imports, on the other hand, were practically unchanged in 1954 and increased by only 1 per cent in 1955. Increases in export prepayments in both years also contributed to the improvement. The U.S. aid in 1955 was largely in the form of surplus U.S. agricultural products sold to Japan for yen currency.

Table 2. Changes in Japan's Balance of Payments, 1954 and 1955[1]

(In millions of U.S. dollars)

	Change from 1953 to 1954	Change from 1954 to 1955
Items causing improvement		
Exports f.o.b.	+353	+395
Imports f.o.b.	+10	—[2]
Private capital[3]	+29	+71
U.S. aid[4]	—	+52
Other[5]	+42	+22
	+434	+540
Items causing deterioration		
Special government receipts	—201	—97
Imports f.o.b.	—[2]	—21
Other[6]	—22	—61
	—223	—179
Net improvement	+211	+361

[1] Adapted from data in International Monetary Fund, *Balance of Payments Yearbook*.

[2] Imports declined by $10 million in 1954 and increased by $21 million in 1955.

[3] Principally larger export prepayments.

[4] There was no U.S. aid in either 1953 or 1954.

[5] Transportation and insurance, private donations, and, for 1954, official long-term capital and donations, and errors and omissions.

[6] International investment income account, miscellaneous services, and, for 1955, official long-term capital and donations, and errors and omissions.

The nature and magnitude of the improvement in the trade balance is brought out strikingly by the data in Table 3 and Chart 1, which are related to the year 1950. In that base year, trade was balanced so that the chart, in portraying the change in the trade position relative to the base year, also indicates the position in absolute terms. The gap between the import purchasing power of exports at going import prices and the actual volume of imports widened progressively during 1951–53 but was almost entirely filled in the following two years, principally because a rapidly rising export volume enhanced Japan's import purchasing power during the latter period. Imports increased, but only slightly. The parallelism between the export volume curve and the import purchasing power curve shows the negligible role of the terms of trade.

In keeping the value of its imports almost constant, Japan was helped by lower prices of some of the imported commodities, especially foodgrains and textile raw materials. There was also a noticeable draft on domestic stocks of imported raw materials during 1954. Commercial policy played a minor role in cutting down nonessential imports. The primary explanation of the stability of imports is found, however, in the slower rate of domestic growth.

Export promotion measures

The question of the extent to which commercial or exchange policy measures were responsible for the expansion of Japanese exports is pertinent. Some improvement should be attributed to the relaxation of restrictions on Japanese imports by certain countries in the sterling area which had tightened them in 1952–53; the tightening was among

Table 3. Indices of Import Purchasing Power of Japanese Exports and Actual Imports, 1951–55[1]

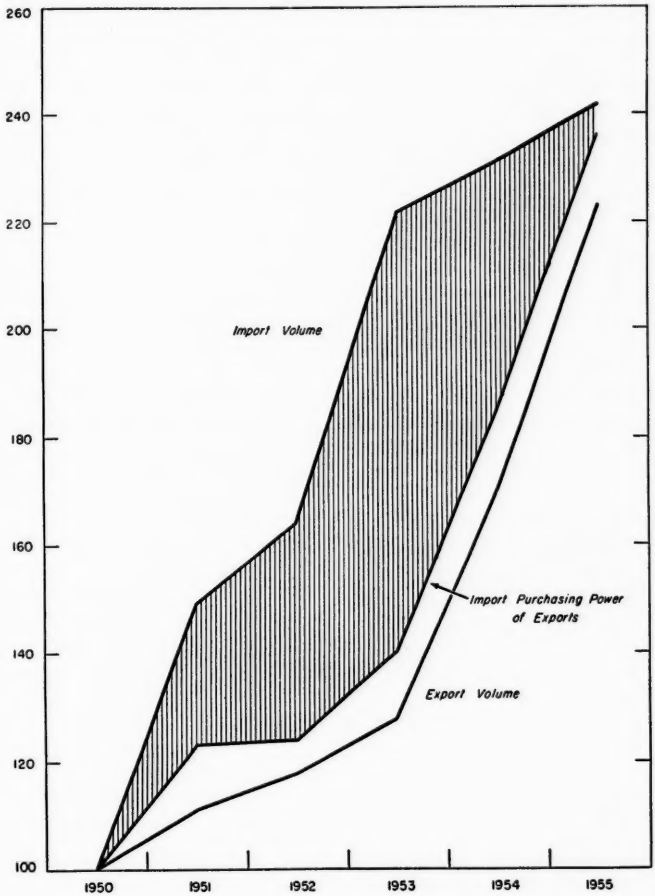
(*1950 = 100*)

	Unit Value of Exports[2]	Unit Value of Imports[2]	Terms of Trade[3]	Volume of Exports	Purchasing Power of Exports[4]	Volume of Actual Imports
1951	149	134	111	111	123	149
1952	132	125	105	118	124	164
1953	122	112	109	128	140	222
1954	117	107	109	170	185	231
1955	111	105	106	223	236	242

[1] Based on data from International Monetary Fund, *International Financial Statistics* and *Balance of Payments Yearbook*.
[2] Calculated from f.o.b. values and indices of volume.
[3] Unit value of exports divided by unit value of imports.
[4] Terms of trade index multiplied by the export volume index.

CHART 1. INDICES OF IMPORT PURCHASING POWER OF JAPANESE EXPORTS AND ACTUAL IMPORTS, 1950–55[1]

(*1950 = 100*)



[1] Import purchasing power of exports is the product of the terms of trade index and the export volume index; see Table 3.

the causes of Japan's payments difficulties in 1953. In January 1954, the United Kingdom agreed with Japan that it would relax its restrictions against Japanese imports, that the Crown Colonies would do the same, and that the United Kingdom would use its good offices in recommending relaxation to the independent members of the sterling area. During 1954, a number of independent sterling area countries and colonies permitted freer importation of Japanese goods.

Japanese commercial and exchange policy has often been criticized as being responsible for a substantial portion of the increase in exports. While certain measures may have provided artificial incentives to exports they do not, in general, appear to be significant. On the other hand, Japan has had to restrict its exports to one of its important markets.

One of the policy techniques which has been criticized is the retention quota. Until August 1953, it was available to exporters to the dollar area for percentages of their export proceeds varying between 5 and 15 per cent, depending on the nature of the commodity. In that month, the system was extended to all exporters at a uniform rate of 10 per cent. There were some transfers of the retained exchange at premium rates, but the authorities were successful in reducing the premium by removing from the list of permissible imports commodities whose importation seemed excessively profitable. In March 1955, the quota was reduced to 5 per cent.[22] Since any exchange depreciation involved must have been very small, and since the system was in operation, although in a somewhat less extensive form, at least two years before the export expansion began, the retention quota could not have been important in stimulating exports. In fact, the Japanese authorities consider the system only a means of allocating exchange for certain purposes that do not fit easily into the regular exchange budget, especially because there is no previous experience with regard to them; hence the name, "Special Foreign Exchange Allocation System."

Somewhat more important as export incentives were the export-import links, which were of two types. First, exporters of certain slow moving goods, such as raw silk, machinery, ships, and whale oil, were permitted licenses for highly profitable import commodities, such as Cuban sugar, bananas, and pineapples. However, this system was completely abolished in August 1954. Under the second type of link, imports of certain raw materials are linked to the exports of the products manufactured from them; that is, the volume of exports of a manufacturer is taken into account in making exchange allocations for imports of raw materials. The authorities say that this system provides

[22] The quota was further reduced to 3 per cent at the beginning of 1957.

an administratively convenient criterion for allocating raw materials. It is also significant that the system operated for a number of years prior to the export boom and that its scope was reduced somewhat in 1955.

Some encouragement to exports was provided by certain interest rate and taxation measures taken in 1954–55. The Export-Import Bank, which extends loans for the export of plant and machinery at concession interest rates, further reduced its rates. The Bank of Japan liberalized its low interest rate for discounting export bills. As mentioned earlier, the limits of exemption of export income from the corporation tax were raised.

Since the credit balances accumulated on the bilateral clearing account with Indonesia were proving relatively illiquid, Japan restricted exports to that country from the middle of 1954. Certain goods were made subject to an "export rights" system, and only traders who had imported Indonesian goods of equivalent value were allowed to export them to Indonesia; quotas were imposed on certain other goods. As a result, exports to Indonesia in 1955 fell to about half the amount in 1954.

Relation between output, absorption, and external balance

It has long been recognized that the balance of external payments of a country necessarily reflects the difference between its total output of goods and services and its absorption—use for consumption and investment—of them. On the basis of this identity, it has recently been argued that the analysis of the effects of a policy measure, such as devaluation, designed to influence the balance of payments could fruitfully proceed via the effects of the measure on output and absorption. One objection to this approach has been that the relationships given in the equation are classificatory rather than causal and that, therefore, it is not justifiable to posit a dependence, in any causal sense, of the trade balance on the relationship between output and absorption any more than it is to posit a dependence of absorption on the relationship between output and the trade balance. Whatever the validity of this argument, it applies with the least force to an analysis of deflationary policy along these lines; for, in this case, it is absorption that is frontally attacked with a view to securing the desired results in the external balance, and success depends on the extent to which absorption can be reduced relative to output.

In an economy operating at full employment, an improvement in the balance of payments necessarily requires a reduction in the domestic absorption of goods and services. The austerity that is required is

reduced to the extent that gains are made in productivity and extensions occur in productive capacity as a result of earlier investments. Barring such relief, the necessary adjustment can come about at, broadly, three levels: First, a contraction of domestic consumer or investment demand, even without inducing a change in relative prices, could, on the one hand, make more goods available for export and, on the other, dampen the demand for imports. Second, the reduction in domestic absorption could squeeze profit margins and lower the prices of exportable goods relative to those in other countries or make them otherwise more competitive. If, however, the squeeze on profits cannot be passed on to other factors of production, output and employment are likely to decline after a while. In any instance of a serious payments disequilibrium, therefore, a fundamental adjustment at the third level, consisting of a reallocation of factors as between export and domestic industries, will be necessary. Resources released from the domestic goods industries will have to be channeled into export industries. In the absence of a facilitating circumstance, such as a rising world demand, or an assisting policy measure, such as an exchange rate adjustment, the reallocation will be a painful process, involving considerable unemployment.

In the following paragraphs, an attempt is made to view the developments in the Japanese economy during 1954–55 from the standpoint of variations in output and absorption. Since the relevant data are published by the Japanese authorities only in current prices, they have been adjusted for price changes by using a variety of price indices. Such adjustments cannot be very accurate, and the figures should therefore be taken only as indications of the direction and the broad magnitudes of change.

From the data in Table 4 it appears that the principal component of the change in total absorption was inventory investment, although it is interesting to note that there was no decumulation of inventories. The movement of inventories is difficult to explain, since the intended and unintended elements in their variations cannot be separated. While the stringency of credit must have induced inventory liquidation, the decline in sales would result in an unintended accumulation. Evidence is available to indicate that there was indeed an increase in the stocks of finished goods held by manufacturers as well as by dealers. In view of this, the deliberately attempted inventory liquidation is likely to have been even greater than the figures available for actual results. The role of import restrictions is difficult to gauge in the absence of knowledge concerning the import content of inventories. As far as imported raw materials are concerned, the authorities must have considered the existing levels of stocks before making exchange allocations.

TABLE 4. INDICATORS OF JAPAN'S INCOME, ABSORPTION, AND EXTERNAL BALANCE, 1951–55[1]

(In billions of yen at 1951 prices)[2]

	1951	1952	1953	1954	1955
I. Gross national product	5,086	5,612	6,169	6,357	6,844
II. Consumption expenditures					
Private	2,845	3,327	3,712	3,843	4,060
Government	465	612	607	688	756
	3,310	3,939	4,319	4,531	4,816
III. Investment expenditures					
Fixed investment	1,006	1,130	1,443	1,499	1,500
Private	*680*	*725*	*883*	*924*	*894*
Government	*326*	*405*	*560*	*575*	*606*
Inventory investment	614	416	394	267	400
	1,620	1,546	1,837	1,766	1,900
IV. Domestic absorption (II + III)	4,930	5,485	6,156	6,297	6,716
V. External balance (I — IV)	156	127	13	60	128

[1] Based on statistics of the Economic Planning Board, Tokyo.

The figures for the external balance in this table differ considerably from the surplus or deficit on current account as shown by the balance of payments statistics. Although there was a large payments deficit in 1953, the figures here show a small surplus. A precise identity cannot, in any event, be expected since the figures in the table are obtained by subtracting domestic absorption deflated to 1951 yen values from gross national product similarly deflated; on the other hand, the current account surplus in the payments statistics is obviously derived from values in terms of prices prevailing in the given year. However, the principal factor accounting for the difference is that the share of the expenses of the U.S. forces borne by Japan is included in exports in the national income data as a demand on resources by nonresidents, but it is excluded from exports in the balance of payments data since no exchange transactions are involved.

[2] Deflators: For consumption expenditures, a consumer goods price index weighted 40 per cent for prices in the rural areas and 60 per cent for those in the urban areas; for investment expenditures, a producer goods price index; for gross national product and inventories, an over-all index with a weight of 75 per cent for the consumer goods index above and of 25 per cent for the producer goods index.

It must be remembered, however, that the volume of imports did not decline in either 1954 or 1955; the decline that took place in the stocks of imported raw materials could be explained entirely in terms of the expansion of industrial activity. In general, therefore, it seems safe to conclude that the financial policies of the authorities which raised the cost of holding inventories and, perhaps equally important, induced a change in expectations were by far the main factors responsible for

reducing the value of inventory investment during 1954. The increase in this type of investment during 1955, compared with that in 1954, was largely the result of an accumulation of government stocks of foodgrains purchased from the bumper crops of that year.

Total fixed investment increased by less than 4 per cent in 1954, as both private and government investment increased only moderately. In the following year, government investment increased further, but a decline in private investment expenditures kept the total almost unchanged. Changes in government investment are essentially autonomous; the fact that it increased only moderately, especially in 1955, was a part of the disinflationary program. The role of domestic policy measures in lessening private investment demand is underscored when it is recalled that exports were increasing during 1954–55 at an annual rate of over 25 per cent. The reaction of this category of demand to the disinflationary policy seems even greater if its trend within these two years, rather than annual totals, are considered. National expenditure data are not available at less than annual intervals; from other indicators of investment, however, it seems that private investment expenditures declined during 1954 and the first half of 1955 from the high levels they had reached earlier. They recovered rather sharply thereafter, partly as a lagged response to rising exports; in any event, the force of disinflationary policy was by then largely spent.

Production increased in both 1954 and 1955 but at a slower pace than in earlier years. Industrial production increased by about 8 per cent in each of the two years. While not small in itself, this rate of advance should be compared with the increase of 22 per cent in 1953. Agricultural production, assisted by favorable weather conditions, also increased by about 10 per cent in both 1954 and 1955.

It is clear that, on the whole, there was no "disabsorption" in the Japanese economy during 1954–55. However, the annual rate of growth of absorption was sharply checked in 1954; output expanded, albeit also at a slower pace, by a magnitude greater than the increase in absorption. The external balance improved correspondingly. Absorption recovered substantially in 1955, but production increased even more, and the improvement in the external balance was larger than in the preceding year.

It cannot be said, therefore, that resources were released from the domestic to the export sector as a result of the disinflationary policy. Rather, resources that became newly available during this period were attracted to the export sector and were not pre-empted by the domestic sector. Domestic demand having been restrained by the disinflationary policy, the rising tide of world demand with which Japan was favored did not need to compete too severely with it; the foreign

demand could be more readily satisfied. With less favorable world demand conditions, the same striking improvement in the balance of payments could not have been secured with the given dose of disinflation. These remarks should not be interpreted to mean that the domestic expenditure policy made no contribution at all to the 1954–55 improvement in the Japanese payments position. It must be emphasized that both factors—the intensification of the pull of foreign demand and the relaxation of the pull of domestic demand—were of equal importance. If domestic expenditures had been left unbridled during 1954–55, the balance of payments probably would not have improved to any significant extent.

Even with its considerable underemployment, the Japanese economy, on the eve of the initiation of restrictive financial policies, could be said to have been operating like an economy at full employment.[23] With full employment and no decline in domestic absorption, the increase in resources available to the export sector came largely from two sources. One was the increase in productivity, which is necessarily an important feature of the secular growth of a dynamic economy like that of Japan. Even the year-by-year advance has been substantial in Japan in the postwar years; the gains in 1954 and 1955 averaged about 7 per cent.[24] The profit squeeze exerted by the tight money policy may have played some part in encouraging the adoption of such measures as would yield cost reductions quickly.[25] The second source was the investment projects undertaken during the 1953 boom, many of which bore fruit during 1954–55 and considerably enlarged productive capacity; it appears that industrial capacity increased as much in the year ended March 1955 as in the preceding year, and one and a half times as much in the year ended March 1956.

As would have been expected, the process of absorption of the new resources by the export sector was slow. This was reflected in the wide-

[23] As far as the possibility of raising output in the short run by increasing expenditures is concerned, an economy with disguised unemployment is similar to one at full employment. See V.K.R.V. Rao, "Investment, Income and the Multiplier in an Underdeveloped Economy," *Indian Economic Review* (Delhi), Vol. 1, No. 1, 1952.

[24] The index on which this comparison is based is not completely satisfactory since the employment data used in its compilation relate only to establishments employing more than 30 workers while the production data relate to all establishments. It is found, however, that a broadening of the employment series does not give substantially different results. There is, moreover, corroborating evidence in some statistical studies indicating a reduction in the number of man-hours required per unit of output and also in the consumption of raw material and energy.

[25] ". . . production was upped measurably in some industries by a slight touching up of plant or process. . . . For example, a stripping mill's capacity was trebled merely by installing a roll stand and a cutting machine." Economic Planning Board, *Economic Survey of Japan, 1955–56* (Tokyo, 1956), p. 8.

TABLE 5. COMPARISON OF PRICES AND VOLUME OF JAPAN'S EXPORTS WITH THOSE OF ITS COMPETITORS, 1951–55[1]

	Indices of Export Prices (*1950 = 100*)		Indices of Export Volume (*1950 = 100*)		Japanese Exports Relative to Those of Competitors	
	Japan	Competitors	Japan	Competitors	Price	Volume
1951	149	122	111	114	122	97
1952	132	124	118	110	106	107
1953	122	116	128	118	105	109
1954	117	114	170	127	103	134
1955	111	115	223	140	96	159

[1] Based on data from International Monetary Fund, *International Financial Statistics*. Belgium, Canada, France, West Germany, Italy, Sweden, Switzerland, the United Kingdom, and the United States are given equal weight in computing the indices for competitors.

spread prevalence of excess capacity conditions during 1954 and the larger part of 1955. Unemployment also increased.

While this study has emphasized the benefits that accrued to Japan from the expansion of world trade, it should be noted that Japanese exports increased during 1954–55 by a much larger percentage than did world imports.[26] In other words, Japan was able to carve out a much larger portion of the total pie for itself, which clearly suggests an improvement in the competitive position of Japanese exports. Data collected by the Japanese authorities show that the competitive advantage in textiles which Japan enjoyed even in 1953 was enhanced during the following two years; the competitiveness of certain heavy industry products also improved sharply in 1954, although some of the gains were lost in 1955. The lower export prices, especially in 1954, were, in part, only at the expense of profit margins; in part, however, the resources that were made newly available and were not absorbed by domestic demand helped make a more basic improvement in the competitiveness of certain exports. As shown in Table 5, the over-all export price reduction during 1954–55 was rather small, in comparison with the spectacular increase in exports; prices are, however, only one of the considerations in competitiveness. In addition to the price reductions, the time interval between orders and deliveries could be kept

[26] A partial explanation of this may lie in the more than proportionate increase during 1955 in the demand for imports by the United States; exports to the United States form a larger proportion of Japan's total exports than of the total exports of any other leading industrial country. It must again be noted, however, that while total U.S. imports rose by 11 per cent in 1955 and its imports of manufactured goods by 20 per cent, Japanese exports to the United States increased by about 62 per cent. Further, while total U.S. imports in 1954 were lower than in 1953, U.S. imports from Japan were 20 per cent higher.

short, a consideration no less important than prices.[27] In some of Japan's competitor countries, export demand was compounded with domestic demand to produce a strain that was not allowed to raise prices but was reflected in a lengthening of order books.

IV. Summary

The role of commercial or exchange policy in bringing about the improvement in the Japanese payments position in 1954–55 was unimportant. While the pull of domestic demand on resources was weakened by the financial policies of the authorities, Japan was also favored by a rapidly rising foreign demand for its products. Principally as a result of reduced availability of credit, inventory building slackened and private investment expenditures failed to increase much in 1954, and they declined in 1955. The investment demand of the Government increased only moderately. These were important factors contributing to the improvement in Japan's balance of payments in this period.

The austerity required of the Japanese economy was small: There was no domestic "disabsorption" and, even in the field of inventories which bore the brunt of adjustment, there was no disinvestment; only the rate of increase in absorption was reduced. This limited austerity was sufficient, because gains in productivity and extensions in productive capacity resulting from earlier investments brought forth a flow of supplies that were not appropriated by domestic demand but found a broadening outlet in foreign markets.

[27] See R. F. Harrod, "The British Boom, 1954–55," *Economic Journal* (London), Vol. 66 (1956), pp. 1–16.